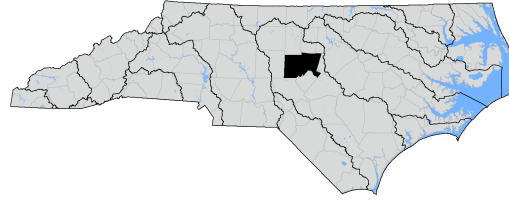


# PRELIMINARY FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

A Report of Flood Hazards in  
**CHATHAM COUNTY, NORTH  
CAROLINA AND  
INCORPORATED AREAS**



Community Name	Community Number
CHATHAM COUNTY	370299
TOWN OF CARY	370238
TOWN OF GOLDSTON	370569
TOWN OF PITTSBORO	370420
TOWN OF SILER CITY	370058



**PRELIMINARY: 3/31/2015**

**REVISED: 3/31/2015**

**Federal Emergency Management Agency**

**State of North Carolina**

**Flood Insurance Study Number**

**37037CV000**

**[www.fema.gov](http://www.fema.gov) and [www.ncfloodmaps.com](http://www.ncfloodmaps.com)**



# FOREWORD

This countywide Flood Insurance Study (FIS) Report was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long-term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the state level. As a part of this effort, the State of North Carolina has joined with FEMA in a Cooperating Technical State (CTS) agreement to produce and maintain this FIS Report and the accompanying digital Flood Insurance Rate Map (FIRM) for North Carolina.

## NOTICE TO FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

The following is a list of the publication dates of this Countywide FIS Report starting with the initial Report accompanying the North Carolina Statewide FIRM:

Date	Reason
2/2/2007	Initial Countywide FIS Report Effective Date

This FIS has been produced as part of the North Carolina Floodplain Mapping Program. Chatham County, North Carolina, falls under the administrative jurisdiction of Region IV of the Federal Emergency Management Agency (FEMA). Questions concerning this FIS may be directed to the North Carolina Floodplain Mapping Program at [www.ncfloodmaps.com](http://www.ncfloodmaps.com), the FEMA Map Assistance Center by calling the toll-free information line at 1-877-FEMA MAP (1-877-336-2627), or by contacting the FEMA Regional Office at the following address:

**FEMA, Federal Insurance and Mitigation Administration**  
**Koger Center - Rutgers Building**  
**3003 Chamblee Tucker Road**  
**Atlanta, Georgia 30341**  
**(770) 220-5400**

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# 1.0 Introduction

## 1.1 The National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. Federally backed flood insurance is available in more than 19,000 communities across the United States and its territories.

The NFIP is managed by the Federal Insurance and Mitigation Administration of the Federal Emergency Management Agency (FEMA). The Federal Insurance and Mitigation Administration manages the insurance component of the NFIP and oversees the flood hazard mapping and the floodplain management aspects of the program.

The NFIP, through involvement with communities, the insurance industry, and the lending industry, helps reduce flood damage by nearly \$800 million a year. Further, buildings constructed in compliance with NFIP building standards suffer approximately 80% less damage annually than those not built in compliance. In addition, every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments. The NFIP is self-supporting for the average historical loss year, which means that operating expenses and flood insurance claims are not paid by the taxpayer, but through premiums collected for flood insurance policies.

Additional information of interest to homeowners, community officials, insurance companies, lenders, and study contractors is available in Section 9.0 of this FIS Report and on the NFIP Internet homepage at <http://www.fema.gov/business/nfip/>.

## 1.2 Purpose of this Flood Insurance Study

Flood Insurance Studies (FISs) are one of the primary means by which the NFIP administers the National Flood Insurance Act of 1968, the Flood Disaster Protection Act of 1973, and the National Flood Insurance Reform Act of 1994. FISs develop flood risk data that are used to establish actuarial flood insurance rates. The information in this FIS Report will also be used by Chatham County and the jurisdictions therein (hereinafter referred to collectively as Chatham County) to facilitate the adoption and maintenance of floodplain management ordinances, which form the basis of communities' continued participation in the NFIP. Minimum requirements for participation in the NFIP are set forth in Title 44, Part 60, Section 3 of the Code of Federal Regulations (44 CFR 60.3). In some States and/or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. In such cases, the more restrictive criteria will take precedence, and the State and/or community (or other jurisdictional agency) will be able to explain them.

This FIS investigates the existence and severity of flood hazards in, or revises and updates previous FISs for, the geographic area of Chatham County, North Carolina, including the jurisdictions listed in Table 1.

**Table 1 - Jurisdictions in Chatham County**

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
CHATHAM COUNTY	Yes	*
TOWN OF CARY	Yes	*
TOWN OF GOLDSTON	Yes	*
TOWN OF PITTSBORO	Yes	*
TOWN OF SILER CITY	Yes	*

## 1.3 FIS Components

A Flood Insurance Study (FIS) is an analysis of flood hazards, typically presented as a set of Flood Insurance Rate Map (FIRM) panels

and the FIS Report, which includes a set of Flood Profiles and/or Water-surface elevation rasters.

### **Flood Insurance Study Report**

The FIS Report provides a context for the information shown on the FIRM, as well as a summary of the data upon which the analyses are based. It also includes an index of sources of additional information on the NFIP.

## **1.4 Considerations for Using this Flood Insurance Study Report**

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% annual chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 27, "Map Repositories," within this FIS Report.

New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

The Initial Countywide FIS Report for Chatham became Effective on 2/2/2007. Refer to Table XX for information about subsequent revisions to FIRMs.

Selected FIRM panels for the community may contain information (such as floodways and cross sections) that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels. In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X (shaded)
C	X (unshaded)

FEMA does not impose floodplain management requirements or special insurance ratings based on Limit of Moderate Wave Action (LiMWA) delineations at this time. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. If the LiMWA is shown on the FIRM, it is being provided by FEMA as information only. For communities that do adopt Zone VE building standards in the area defined by the LiMWA, additional Community Rating System (CRS) credits are available. Refer to Section 2.5.4 for additional information about the LiMWA.

The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Visit the FEMA Web site at <http://www.fema.gov> or contact your appropriate FEMA Regional Office for more information about this program.

Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1% annual chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems.

Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information

regarding levees presented in Table 9 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE national levee database. For all other levees, the user is encouraged to contact the appropriate local community.

FEMA has developed a Guide to Flood Maps (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at <http://www.fema.gov>.

## 2.0 Floodplain Management Applications

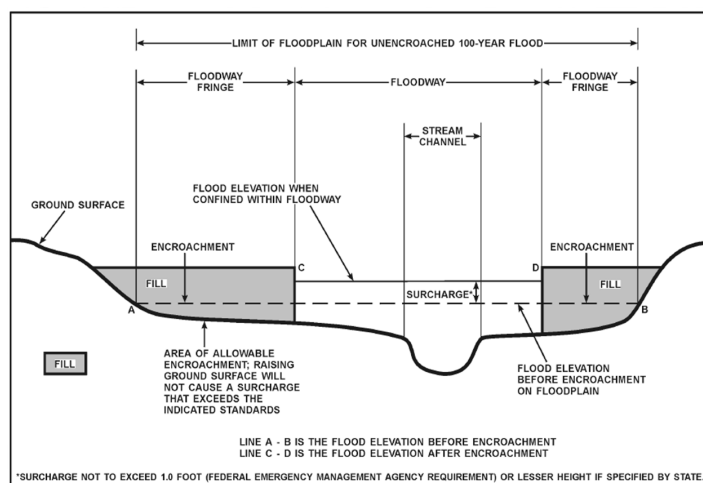
Flood events of a magnitude expected to occur with a 10%, 2%, 1%, or 0.2% annual chance have been selected as having special significance for developing sound floodplain management programs. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10%, 2%, 1%, and 0.2% chance, respectively, of being equaled in any given year. Therefore, FIS Reports typically determine water-surface elevations for floods with these probabilities. The FIRM delineates 1% and 0.2% annual chance floodplains and 1% annual chance floodway boundaries, and depicts 1% annual chance flood elevations, rounded to the nearest foot, to assist in developing floodplain management measures.

### 2.1 Floodplains

To provide a national standard without regional discrimination, the 1% annual chance flood has been adopted by FEMA as the base flood for floodplain management purposes. A 1% annual chance flood, or base flood, is defined as that having a 1% chance of being equaled or exceeded in any given year. The 1% annual chance floodplains shown on the FIRM identify areas that are expected to be inundated by the 1% annual chance flood. This 1% annual chance floodplain is also called a Special Flood Hazard Area (SFHA), where the NFIP's floodplain management regulations must be enforced by the community as a condition of participation in the NFIP. The 0.2% annual chance floodplain is employed to indicate additional areas of flood risk associated with exceptionally severe floods.

### 2.2 Floodways

Encroachment on floodplains such as that caused by placement of structures and fill reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, floodways are provided as a tool to assist local communities in this aspect of floodplain management. Under this concept, the 1% annual chance riverine floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. Figure 1, "Floodway Schematic," illustrates this principle. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this FIS are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional encroachment studies.



## 2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (BFE) is the elevation of the 1% annual chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. BFEs are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM.

## 2.4 Watershed Characteristics

Because a FIS is a probability analysis that may not account for some of the factors listed below, communities are strongly encouraged to consider adopting more restrictive or higher floodplain management criteria or ordinances than the minimum Federal requirements. Communities may also increase the validity of their flood hazard data by investing in continuous maintenance of river gages (see the Data Validity and Reliability paragraph below). If the U.S. Geological Survey (USGS) or other agencies do not maintain gages on the flooding sources of interest, partnerships with the USGS may be pursued, or local gages may be installed. For more information, see Section 9.0 of this report.

This flood hazard study represents an analysis of certain watershed characteristics, some of which are summarized as follows:

### Drainage Area

In general, streams that drain larger areas have greater flood hazards. FISs, in North Carolina, do not typically analyze flood hazards in places with rural drainage areas of less than one square mile and within urban drainage areas of less than ½ square mile.

### Soil Permeability and Infiltration

Differences in the types of soil and the amount of vegetation in a watershed have a significant effect on the amount of water that the soil can absorb; soils with a high sand content absorb much more water than soils with a high clay content. The presence of vegetation increases infiltration; the presence of pavement decreases infiltration and also speeds runoff to receiving waters. As soil permeability and infiltration decrease, the volume and rate of overland flow increases.

### Soil Moisture Conditions

In addition to soil permeability and infiltration, the level of the water table helps determine the saturation point, beyond which no water is absorbed. As rainfall duration increases, the height of the water table increases.

### Channel and Floodplain Geometry

The geometric contour of a streambed, termed channel geometry, and the geometric contour of a floodplain determine the volume of water that a channel can hold and partially determine the rate at which water flows through it.

### Channel and Floodplain Roughness

The roughness of a surface affects the characteristics of runoff whether the water is on the surface of the watershed or in the channel.

FIS Reports include analyses of how these factors will combine to produce overland flow patterns during floods that have a certain probability of occurring in any given year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at shorter intervals or even within the same year. The risk of experiencing a rare flood increases when longer periods are considered. For example, the risk of having a flood which equals or exceeds the 1% annual chance flood (1% chance of annual exceedence) in any 50-year period is approximately 40% (4 in 10), but for any 90-year period, the risk increases to approximately 60% (6 in 10).

It is important to note that the 1% annual chance flood is used as the national standard to allow a consistent approach to floodplain



management, flood hazard assessment, and flood hazard mapping. In any given community, a number of factors may result in flooding characteristics that do not conform to predicted conditions. Therefore, the determination that an area is not shown on the FIRM as being within a Special Flood Hazard Area is no guarantee that it will not flood during a 1% annual chance flood. Examples of these factors include Data Validity and Reliability; Developmental and Topographic Changes Over Time; Erosion, Deposition, and Debris Flow; and Meandering and Lateral Migration.

#### **Data Validity and Reliability**

Certain types of analysis methods yield more justifiable characterizations of flood hazards. For example, a gage analysis, to determine peak discharges, is based on actual measurements of watershed conditions over time and, therefore, is typically considered the most accurate method of hydrologic analysis. However, it is not feasible to install enough gages to gather data on every stream. In addition, for many of the gage sites that do exist, there are interruptions in the period of record. The usefulness of gage data for the purpose of predicting flooding behavior decreases with interruptions in the period of record; predicted flooding conditions over a 100-year period based on 20 years of measurements spread over a 35-year period are less valid than those based on 30 years of continuous measurements. A regression analysis is typically considered the best method in the absence of gage data, as it uses gage data from watersheds with similar characteristics to estimate flood frequency and magnitude in an ungaged watershed. Regression equations reflect average conditions for a region; therefore, the results will not exactly match the results of a gage analysis at a particular location. The standard errors of the North Carolina rural regression equations range from 44 to 51 percent for estimates of the 1% annual chance flood. That means the difference between the results of the regression equation and the gage analysis for approximately two-thirds of the locations that gage data exists are within 44 to 51 percent of the gage analysis results. A rainfall-runoff hydrologic analysis may be used for gaged or ungaged watersheds, and can estimate the effects of storage areas and flood control structures and measures. This method is most valid when calibrated against historical data.

#### **Developmental and Topographic Changes Over Time**

A FIRM is based on the best topographic and planimetric information available to FEMA and the State of North Carolina at the time the study is produced. In time, however, development and/or natural phenomena can alter the physical characteristics of a watershed and its drainage channels, resulting in changes in the flood hazards in those areas. For example, constructing a housing subdivision reduces the amount of soil that is available to absorb water; this in turn causes an increase in the volume of surface water that flows into the channel.

#### **Erosion, Deposition, and Debris Flow**

The flood hazards shown on a FIRM are based on the assumption of unobstructed flow. The FIRM does not reflect an analysis of areas that are subject to erosion caused by the increased water-surface elevations and velocities that occur during flooding. In addition to the risks of landslides or a weakening of the ground underneath roads or structures, any sediment that is removed from one location will be deposited in another; accumulated deposits may have a pronounced effect on flood hazards in those areas. Similarly, debris such as fallen trees or branches, litter, or other items may obstruct stream channels or hydraulic structures, increasing water-surface elevations, velocities, and floodplain width.

#### **Meandering and Lateral Migration**

FISs are based on the assumption that channel geometry will remain stable during normal drainage and during flood events. This assumption is valid for most streams, which flow over bedrock or between bedrock outcroppings that form non-alluvial channels. However, alluvial streams change the channel geometry with time, significantly so during flood events. Alluvial streams are subject to erosion and deposition, which may result in braided or meandering channels. Streams of this type may be characterized by lateral migration, or channel shifting, in which the stream may change course entirely during a flood. Whenever clear evidence is available, a FIRM will identify the alluvial nature of a studied flooding source and designate wider floodways to allow for potential migration. However, these floodways are based on qualitative assessments and not on quantitative geomorphic and engineering analyses.

## **2.5 Coastal Flood Hazard Areas**

For most areas along rivers, streams, and small lakes, BFEs and floodplain boundaries are based on the amount of water expected to enter the area during a 1% annual chance flood and the geometry of the floodplain. Floods in these areas are typically caused by storm events. However, for areas on or near ocean coasts, large rivers, or large bodies of water, BFE and floodplain boundaries may need to be based on additional components, including storm surges and waves. Communities on or near ocean coasts face flood hazards caused by offshore seismic events as well as storm events.

Coastal flooding sources that are included in this Flood Risk Project are shown in Table XX.

### 2.5.1 Water Elevations and the Effects of Waves

Specific terminology is used in coastal analyses to indicate which components have been included in evaluating flood hazards.

The stillwater elevation (SWEL or still water level) is the surface of the water resulting from astronomical tides, storm surge, and freshwater inputs, but excluding wave setup contribution or the effects of waves.

- *Astronomical tides* are periodic rises and falls in large bodies of water caused by the rotation of the earth and by the gravitational forces exerted by the earth, moon and sun.
- *Storm surge* is the additional water depth that occurs during large storm events. These events can bring air pressure changes and strong winds that force water up against the shore.
- *Freshwater inputs* include rainfall that falls directly on the body of water, runoff from surfaces and overland flow, and inputs from rivers.

The 1% annual chance stillwater elevation is the stillwater elevation that has been calculated for a storm surge from a 1% annual chance storm. The 1% annual chance storm surge can be determined from analyses of tidal gage records, statistical study of regional historical storms, or other modeling approaches. Stillwater elevations for storms of other frequencies can be developed using similar approaches.

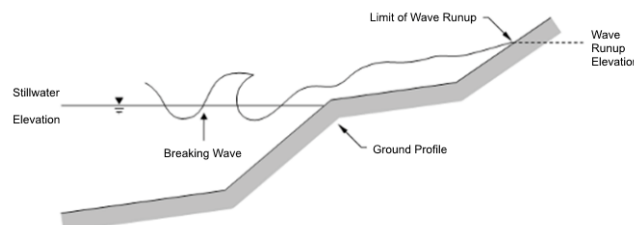
The total stillwater elevation (also referred to as the mean water level) is the stillwater elevation plus wave setup contribution but excluding the effects of waves.

- *Wave setup* is the increase in stillwater elevation at the shoreline caused by the reduction of waves in shallow water. It occurs as breaking wave momentum is transferred to the water column.

Like the stillwater elevation, the total stillwater elevation is based on a storm of a particular frequency, such as the 1% annual chance storm. Wave setup is typically estimated using standard engineering practices or calculated using models, since tidal gages are often sited in areas sheltered from wave action and do not capture this information.

Coastal analyses may examine the effects of overland waves by analyzing storm-induced erosion, overland wave propagation, wave runup, and/or wave overtopping.

- *Storm-induced erosion* is the modification of existing topography by erosion caused by a specific storm event, as opposed to general erosion that occurs at a more constant rate.
- *Overland wave propagation* describes the combined effects of variation in ground elevation, vegetation, and physical features on wave characteristics as waves move onshore.
- *Wave runup* is the uprush of water from wave action on a shore barrier. It is a function of the roughness and geometry of the shoreline at the point where the stillwater elevation intersects the land.
- *Wave overtopping* refers to wave runup that occurs when waves pass over the crest of a barrier.



**Figure 5: Wave Runup Transect Schematic**

### 2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

For coastal communities along the Atlantic and Pacific Oceans, the Gulf of Mexico, the Great Lakes, and the Caribbean Sea, flood

hazards must take into account how storm surges, waves, and extreme tides interact with factors such as topography and vegetation. Storm surge and waves must also be considered in assessing flood risk for certain communities on rivers or large inland bodies of water.

Beyond areas that are affected by waves and tides, coastal communities can also have riverine floodplains with designated floodways, as described in previous sections.

### **Floodplain Boundaries**

In many coastal areas, storm surge is the principle component of flooding. The extent of the 1% annual chance floodplain in these areas is derived from the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1% annual chance storm. The methods that were used for calculation of total stillwater elevations for coastal areas are described in Section 5.3 of this FIS Report. Location of total stillwater elevations for coastal areas are shown in Figure 8, “1% Annual Chance Total Stillwater Levels for Coastal Areas.

In some areas, the 1% annual chance floodplain is determined based on the limit of wave runup or wave overtopping for the 1% annual chance storm surge. The methods that were used for calculation of wave hazards are described in Section 5.3 of this FIS Report.

Table 18 and 18P presents the types of coastal analyses that were used in mapping the 1% annual chance floodplain in coastal areas.

### **Coastal BFEs**

Where they apply, coastal BFEs are calculated along transects extending from offshore to the limit of coastal flooding onshore. Results of these analyses are accurate until local topography, vegetation, or development type and density within the community undergoes major changes.

Parameters that were included in calculating coastal BFEs for each transect included in this FIS Report are presented in Table 20, “Coastal Transect Parameters.” The locations of transects are shown in Figure 9, “Transect Location Map.” More detailed information about the methods used in coastal analyses and the results of intermediate steps in the coastal analyses are presented in Section 5.3 of this FIS Report. Additional information on specific mapping methods is provided in Section 6.4 of this FIS Report.

### **2.5.3 Coastal High Hazard Areas**

Certain areas along the open coast and other areas may have higher risk of experiencing structural damage caused by wave action and/or high-velocity water during the 1% annual chance flood. These areas will be identified on the FIRM as Coastal High Hazard Areas.

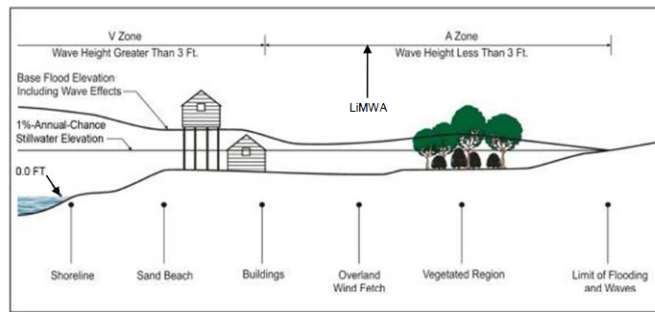
- *Coastal High Hazard Area (CHHA)* is a SFHA extending from offshore to the inland limit of the primary frontal dune (PFD) or any other area subject to damages caused by wave action and/or high-velocity water during the 1% annual chance flood.
- *Primary Frontal Dune (PFD)* is a continuous or nearly continuous mound or ridge of sand with relatively steep slopes immediately landward and adjacent to the beach. The PFD is subject to erosion and overtopping from high tides and waves during major coastal storms.

CHHAs are designated as “V” zones (for “velocity wave zones”) and are subject to more stringent regulatory requirements and a different flood insurance rate structure. The areas of greatest risk are shown as VE on the FIRM. Zone VE is further subdivided into elevation zones and shown with BFEs on the FIRM.

The landward limit of the PFD occurs at a point where there is a distinct change from a relatively steep slope to a relatively mild slope; this point represents the landward extension of Zone VE. Areas of lower risk in the CHHA are designated with Zone V on the FIRM. More detailed information about the identification and designation of Zone VE is presented in Section 6.4 of this FIS Report.

Areas that are not within the CHHA but are SFHAs may still be impacted by coastal flooding and damaging waves; these areas are shown as “A” zones on the FIRM.

Figure 6, “Coastal Transect Schematic,” illustrates the relationship between the base flood elevation, the 1% annual chance stillwater elevation, and the ground profile as well as the location of the Zone VE and Zone AE areas in an area without a PFD subject to overland wave propagation. This figure also illustrates energy dissipation and regeneration of a wave as it moves inland.



**Figure 6: Coastal Transect Schematic**

Methods used in coastal analyses in this Flood Risk Project are presented in Section 5.3 and mapping methods are provided in Section 6.4 of this FIS Report.

Coastal floodplains are shown on the FIRM using the symbology described in Figure 3, “Map Legend for FIRM.” In many cases, the BFE on the FIRM is higher than the stillwater elevations shown in Table 17 due to the presence of wave effects. The higher elevation should be used for construction and/or floodplain management purposes.

#### 2.5.4 Limit of Moderate Wave Action

Laboratory tests and field investigations have shown that wave heights as little as 1.5 feet can cause damage to and failure of typical Zone AE building construction. Wood-frame, light gage steel, or masonry walls on shallow footings or slabs are subject to damage when exposed to waves less than 3 feet in height. Other flood hazards associated with coastal waves (floating debris, high velocity flow, erosion, and scour) can also damage Zone AE construction.

Therefore, a LiMWA boundary may be shown on the FIRM as an informational layer to assist coastal communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The location of the LiMWA relative to Zone VE and Zone AE is shown in Figure 6.

The effects of wave hazards in Zone AE between Zone VE (or the shoreline where Zone VE is not identified) and the limit of the LiMWA boundary are similar to, but less severe than, those in Zone VE where 3-foot or greater breaking waves are projected to occur during the 1% annual chance flooding event. Communities are therefore encouraged to adopt and enforce more stringent floodplain management requirements than the minimum NFIP requirements in the LiMWA. The NFIP Community Rating System provides credits for these actions.

Where wave runoff elevations dominate over wave heights, there is no evidence to date of significant damage to residential structures by runoff depths less than 3 feet. Examples of these areas include areas with steeply sloped beaches, bluffs, or flood protection structures that lie parallel to the shore. In these areas, the FIRM shows the LiMWA immediately landward of the VE/AE boundary. Similarly, in areas where the zone VE designation is based on the presence of a primary frontal dune or wave overtopping, the LiMWA is delineated immediately landward of the Zone VE/AE boundary.

## 3.0 Insurance Applications

### 3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones and, in 1% annual chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies. Table 2, “Flood Zone Designations,” includes a description of each type of flood hazard zone.

**Table 2 - Flood Designations**

Zone	Description
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A	Zone A is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base Flood Elevations or depths are shown within this zone.
AE	Zone AE is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by detailed methods. In most instances, whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AH	Zone AH is the flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AO	Zone AO is the flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within this zone.
AR	Zone AR is the flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
A99	Zone A99 is the flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No Base Flood Elevations or depths are shown within this zone.
V	Zone V is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no Base Flood Elevations are shown within this zone.
VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
X	Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2% annual chance floodplain, areas within the 0.2% annual chance floodplain, and to areas of 1% annual chance flooding where average depths are less than 1 foot, areas of 1% annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone.
X (Future)	Zone X (Future Base Flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.
D	Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

## 3.2 Coastal Barrier Resources System

### 3.2 Coastal Barrier Resources System

This section is not applicable to this FIS project.

## 4.0 Area Studied

Chatham County is found in the Piedmont region of North Carolina. It is surrounded by Alamance and Orange Counties to the north, Wake County to the east, Lee County to the south, Randolph County to the west.

### 4.1 Basin Description

Table 3, "Basin Description" contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its area.

**Table 3 - Basin Description**

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description	HUC Area (square miles)
Deep	03030003	Deep River	The Deep River Basin flows out of southeast Forsyth County. From there it continues southeast, draining parts of Guilford, Randolph, Moore, and Lee Counties before emptying into the Cape Fear River in Chatham County.	1,450
Haw	03030002	Haw River	The Haw River Basin begins in eastern Forsyth County, flowing across low, rolling hills. The basin drains large portions of Guilford, Alamance, and Chatham counties before entering B. Everett Jordan Lake at the headwaters of the Cape Fear River.	1,707
Upper Cape Fear	03030004	Cape Fear River	The Upper Cape Fear Basin begins just downstream of B. Everett Jordan Lake in Chatham County flowing through low, rolling hills until exiting in Cumberland County.	1,630

## 4.2 Principal Flood Problems

Table 4, "Principal Flood Problems" contains a list of principal flooding problems in Chatham County.

**Table 4 - Principal Flood Problems**

Flooding Source	Problem
All Sources	Past flooding on the streams within Chatham County indicates that flooding may occur during any season of the year; most floods, however, occur during the spring as a result of heavy rainfall. Floods are often associated with tropical storms moving north

## 4.3 Historic Flood Elevations

### Hurricane Floyd

(9/16/1999)

Hurricane Floyd made landfall near Wilmington with category two winds of 105 to 110 mph. Rainfall totals from Floyd were as high as 15 to 20 inches over portions of eastern North Carolina; with a record of 23.45 inches of rain falling in the month of September at Wilmington, NC. This breaks the previous record of 21.12 inches set in July 1886. These rains combined with saturated ground from previous rain events, including Hurricane Dennis, to produce an inland flood disaster. There were 74 deaths in the United States, including 52 in North Carolina, due to drowning from flood waters. This makes Floyd the deadliest U.S. hurricane since Agnes in 1972. Data from the USGS indicate that eleven of their stream gage monitoring sites in North Carolina (Ahoskie, Rocky Mount, Hilliardston, White Oak, Enfield, Tarboro, Lucama, Hookerton, Trenton, Chinquapin, and Freeland) exceeded 0.2% annual chance flood levels due to Floyd. Total losses in North Carolina approach \$5 billion with an estimated \$3.5 billion in damages to North Carolina homes, businesses, roads, and infrastructure. Floyd passed relatively close to the entire U.S. east coast, justifying hurricane warnings from Florida to Massachusetts and requiring an estimated two million people to evacuate. The last hurricane to require warnings for as large a stretch of coastline was Hurricane Donna in 1960.

### Hurricane Bonnie

(8/26/1998)

The landfall location of Bonnie was in southern North Carolina near Cape Fear very close to landfall of both Hurricanes Bertha and Fran in 1996. Even though a powerful storm, damage from Bonnie was much less than Fran, which was also Category 3. Winds gusted up to 100 knots and storm tides of 5 to 8 feet above normal were reported mainly in eastern beaches of Brunswick County, while a storm surge of 6 feet was reported at Pasquotank and Camden Counties in the Albemarle Sound.

### Hurricane Fran

(9/5/1996)

The landfall location of Fran near the city of Wilmington and its progression into the Raleigh-Durham area caused an estimated \$1.275 billion in damage in North Carolina alone. Fran hit with gusts up to 105 mph and a storm surge of approximately 16 feet. Over \$1 billion in damage was reported in North Topsail Beach and Surf City and 23 people were killed.

### Hurricane Bertha

(7/12/1996)

1996 was a damaging year in the hurricane history of North Carolina. Tropical Storm Arthur, Hurricane Bertha, and Hurricane Fran all made direct landfall on the North Carolina coastline. It was the most active tropical cyclone season in the state since 1955, when Hurricanes Connie, Diane, and Lone all hit the coast. Bertha entered North Carolina in North Topsail Beach with 105 mph gust and a

storm surge of approximately 5 feet.

#### **Hurricane Gloria**

**(9/26/1985)**

The landfall location of Gloria was Cape Hatteras, with 90 knot winds and a storm surge of approximately 6-8 feet.

#### **Hurricane Diana**

**(9/13/1984)**

The landfall location of Diana was 38 miles south of Wilmington with 90 mph winds at its closest approach to Wilmington. Diana had 115 mph sustained winds before landfall. Storm surge was approximately 5-6 feet.

Table 5, "Historic Flood Elevations", lists selected flooding sources in Chatham County with records of past stages. The table shows the historic peak, a location description, approximate stream station, the date of the historic peak, and approximate recurrence interval of the flood elevation. The approximate recurrence interval for a flood is often estimated based on an analysis of rainfall amounts from a storm and /or stream gage data.

**Table 5 - Historic Flood Elevations**

Flooding Source/Tropical Storm	Location Description	Approx. Stream Station	Historic Peak (Feet NAVD 88)	Date	Approximate Recurrence Interval (in years)
Morris Branch / Hurricane Fran	At upstream face of Howard Road	16330	327.4	9/1/1996	50

\* Data Not Available

## **4.4 Flood Protection Measures**

Flood protection measures may be structural (such as levees, dams, and reservoirs) or non-structural (such as land-use management ordinances, policies, or practices).

Table 6, "Non-Levee Flood Protection Measures", lists the flood protection measures undertaken to mitigate flood damage in Chatham County.

**Table 6 - Non-Levee Flood Protection Measures**

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Haw River	B. EVERETT JORDAN	DAM	B. Everett Jordan Dam on B. Everett Jordan Lake	Undetermined Flood Protection

N/A - Not Applicable

Table 7, "Levees" is not applicable in Chatham County.

## **4.5 Scope of Study**

For this map maintenance revision, a scoping meeting was held in Chatham County to present the results of initial research to the county and communities within the county and to discuss their floodplain mapping needs. The county and communities were asked to provide input on proposed study priorities and analysis methods. These meetings resulted in the identification of flooding sources having a floodplain mapping need. Map Maintenance Plans were developed based on the results of the scoping meetings and were both mailed to each jurisdiction within Chatham County and posted to the State's website at [www.ncfloodmaps.com](http://www.ncfloodmaps.com).

Draft basin plans were developed based on the results of the initial scoping meetings. Final scoping meetings were held by the State and FEMA to provide counties and communities an overview of the draft basin plans, including the proposed scope and schedule for the project, and to provide an opportunity for additional county and community input. After the final scoping meeting was held, the Final Basin Plans were produced.

This FIS covers the geographic area of Chatham County, North Carolina, and all jurisdictions therein. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction. Limits of detailed study are indicated on the Flood Profiles and/or Water-surface elevation rasters and/or the FIRM.

Table 8P, "Scope of Revisions: Revised or New Detailed Study -Preliminary", lists flooding sources that were newly studied by detailed methods or were previously studied by detailed methods and had a change in backwater elevation due to flooding effects from a newly studied flooding source.

**Table 8P - Scope of Revisions: Revised or New Detailed Study - Preliminary**

Source	Riverine Sources		Affected Communities
	From	To	
Dry Creek	At the confluence with Haw River	Approximately 500 feet upstream of NC Highway 87	Chatham County
Haw River	At the confluence with Cape Fear River	Immediately downstream of B. Everett Jordan Lake Dam	Chatham County
Haw River	Jordan Lake	Approximately 0.5 mile upstream of the Guilford/Alamance County boundary	Chatham County Town Of Pittsboro
Indian Creek (into Deep River)	At the confluence with Deep River	Approximately 0.6 mile downstream of Roberts Chapel Road	Chatham County
Little Indian Creek	At the confluence with Indian Creek (into Deep River)	Approximately 2.3 miles upstream of confluence with Indian Creek (into Deep River)	Chatham County
Loves Creek <sup>1</sup>	The confluence with Rocky River	Approximately 1,000 upstream of the confluence with Rocky River	Town Of Siler City
Loves Creek Tributary 1	At the confluence with Loves Creek	Approximately 400 feet upstream of US Highway 64	Town Of Siler City
Morris Branch	The confluence with Panther Creek	Approximately 0.7 mile upstream of confluence with Panther Creek	Chatham County Town Of Cary
Panther Creek	The confluence with Northeast Creek	At the Chatham County Boundary	Chatham County Town Of Cary
Pokeberry Creek	Approximately 1.2 miles downstream of US Highway 15-501	Approximately 1.4 miles upstream of Great Ridge Parkway	Chatham County
Robeson Creek <sup>1</sup>	The confluence with Haw River / B. Everett Jordan Lake	Approximately 9,500 feet upstream of the confluence with Haw River / B. Everett Jordan Lake	Chatham County Town Of Pittsboro
Robeson Creek Tributary 3	At the confluence with Robeson Creek	Approximately 1,800 feet upstream of Oakwood Drive	Town Of Pittsboro
Rocky River	Approximately 0.25 mile downstream of US Highway 64	Approximately 0.25 mile upstream of Siler City Snow Camp Road (SR 1004)	Town Of Siler City
Rocky River Tributary 1	At the confluence with Rocky River	Approximately 800 feet upstream of Siler City Snow Camp Road	Town Of Siler City
Wilkinson Creek	Approximately 1,300 feet upstream of Andrews Store Road	Approximately 0.6 mile upstream of Lamont Norwood Road	Chatham County

<sup>1</sup>Revised to reflect backwater effects from new detailed study

Table 9P, "Scope of Revisions: Redelineated - Preliminary" is not applicable in Chatham County.

Table 10P, "Scope of Revisions: Limited Detailed - Preliminary", lists flooding sources that were newly studied by limited detailed methods or were previously studied by limited detailed methods and had a change in backwater elevation due to flooding effects from a newly studied flooding source.

**Table 10P - Scope of Revisions: Limited Detailed - Preliminary**

Source	Riverine Sources		Affected Communities
	From	To	
B. Everett Jordan Lake	Entire shoreline within Chatham County (Unincorporated Areas)	Entire shoreline within Chatham County (Unincorporated Areas)	Chatham County Town Of Pittsboro
Bear Creek (into Indian Creek) <sup>1</sup>	The confluence with Indian Creek (into Deep River)	Approximately 1,600 feet upstream of the confluence with Indian Creek (into Deep River)	Chatham County
Beaver Creek Tributary 1 <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 7,500 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Beaver Creek Tributary 2 <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 8,500 feet upstream of The confluence with B. Everett Jordan Lake	Chatham County
Beaver Creek Tributary 3 <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 2,000 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Brooks Creek <sup>1</sup>	The confluence with Haw River	Approximately 1,500 feet upstream of the confluence with Haw River	Chatham County Town Of Pittsboro
Bush Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 8,600 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Collins Creek <sup>1</sup>	Confluence with Haw River	Approximately 2,000 feet upstream of the confluence with Haw River	Chatham County
Crooked Creek <sup>1</sup>	Confluence with B. Everett Jordan Lake	Approximately 1,230 feet downstream of Chatham/Durham County boundary	Chatham County



**Table 10P - Scope of Revisions: Limited Detailed - Preliminary**

Source	Riverine Sources		Affected Communities
	From	To	
Crows Creek <sup>1</sup>	The confluence with Terrells Creek	Approximately 2,500 feet upstream of the confluence with Terrells Creek	Chatham County
Cub Creek <sup>1</sup>	Confluence with B. Everett Jordan Lake	Approximately 12,000 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Dry Creek	Approximately 470 feet upstream of NC 87	Approximately 0.8 mile upstream of White Smith Road	Chatham County
East Price Creek	Approximately 530 feet downstream of Amber Wood Road	Approximately 0.6 mile upstream of the Chatham/Orange County boundary	Chatham County
Folkner Branch <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 2.4 miles upstream of the confluence with B. Everett Jordan Lake	Chatham County
Herndon Creek	Approximately 0.8 miles upstream of Jack Bennett Road	Approximately 1.8 mile upstream of Jack Bennett Road	Chatham County
Herndon Creek <sup>1</sup>	The confluence with Bush Creek	Approximately 4,000 feet upstream of the confluence with Bush Creek	Chatham County
Indian Creek (into Deep River)	Approximately 1,950 feet upstream of the confluence of Bear Creek (into Indian Creek)	Approximately 1,060 feet upstream of Goldston Glendon Road	Chatham County
Kit Creek <sup>1</sup>	The confluence with Northeast Creek	Approximately 4,500 feet upstream of the confluence with Northeast Creek	Chatham County Town Of Cary
Lacy Creek	Confluence with Rocky River	Approximately 830 feet upstream of its confluence with Rocky River	Town Of Siler City
Little Indian Creek	Approximately 2.1 miles upstream of the confluence with Indian Creek (into Deep River)	Approximately 2.2 miles upstream of the confluence with Indian Creek (into Deep River)	Chatham County
Long Branch <sup>1</sup>	The confluence with Dry Creek	Approximately 900 feet upstream of the confluence with Dry Creek	Chatham County
Loves Creek Tributary 2 <sup>1</sup>	The confluence with Loves Creek Tributary 1	Approximately 1,350 feet upstream of the confluence with Loves Creek Tributary 1	Town Of Siler City
Loves Creek Tributary 3 <sup>1</sup>	The confluence with Loves Creek Tributary 1	Approximately 400 feet upstream of the confluence with Loves Creek Tributary 1	Town Of Siler City
Mill Branch <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 6,400 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Morgan Creek	The confluence with Jordan Lake	The Durham/Orange County boundary	Chatham County
Mud Lick Creek	Confluence with Rocky River	Approximately 1,350 feet upstream of R C Overman Road	Chatham County
Nancy Branch	Approximately 0.4 mile upstream of confluence with Panther Creek	Approximately 0.1 miles upstream of Del Webb Avenue	Chatham County Town Of Cary
Nancy Branch	The confluence with Panther Creek	Approximately 2130 feet upstream of Panther Creek	Chatham County
New Hope Creek	The Durham/Chatham County Boundary	Approximately 1,400 feet downstream of Old Chapel Hill Road	Chatham County
New Hope River Tributary 1	The confluence with B. Everett Jordan Lake	Approximately 1,480 feet upstream of B. Everett Jordan Lake	Chatham County
Northeast Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 3.4 miles upstream of the confluence with B. Everett Jordan Lake	Chatham County
Overcup Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 3.0 miles upstream of the confluence with B. Everett Jordan Lake	Chatham County
Overcup Creek Tributary <sup>1</sup>	The confluence with Overcup Creek/B. Everett Jordan Lake	Approximately 4,100 feet upstream of the confluence with Overcup Creek/B. Everett Jordan Lake	Chatham County
Parkers Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 2,000 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Pokeberry Creek <sup>1</sup>	The confluence with Haw River	Approximately 2,000 feet upstream of the confluence with Haw River	Chatham County
Rocky Ford Branch	The confluence with White Oak Creek	Approximately 5,000 feet upstream of The confluence with White Oak Creek	Chatham County
Rocky River	Approximately 0.3 miles upstream of Siler City Snow Camp Road	Approximately 0.4 mile upstream of Dam	Chatham County Town Of Siler City
Rocky River	Approximately 1,700 feet downstream of the Charles L. Turner Reservoir dam	Approximately 3,700 feet upstream of the confluence of Mud Lick Creek	Chatham County Town Of Siler City
Rocky River <sup>1</sup>	The confluence with Deep River	Approximately 2,000 feet upstream of the confluence with Deep River	Chatham County Town Of Siler City
Shaddox Creek	Approximately 565 feet downstream of New Elam Church Road	Approximately 1,170 feet downstream of Obler Road	Chatham County
Stinking Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 3,700 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County
Terrells Creek <sup>1</sup>	Confluence with Haw River	Approximately 8,000 feet upstream of the confluence with Haw River	Chatham County
Terrells Creek (West) <sup>1</sup>	Confluence with Haw River	Approximately 4,500 feet upstream of the confluence with Haw River	Chatham County
Unnamed Stream	Approximately 0.6 miles upstream of Old Graham Road	Approximately 400 feet upstream of NC 87	Chatham County

**Table 10P - Scope of Revisions: Limited Detailed - Preliminary**

Source	Riverine Sources		Affected Communities
	From	To	
Unnamed Stream	Approximately 2,040 feet downstream of The Parks Drive	Approximately 1,175 feet upstream of The Parks Drive	Chatham County
Unnamed Stream	Oakwood Drive	Approximately 455 feet upstream of Hillsboro Street	Town Of Pittsboro
Weaver Creek <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 3.9 miles upstream of the confluence with B. Everett Jordan Lake	Chatham County
Weaver Creek Tributary	The confluence with B. Everett Jordan Lake	Approximately 1.0 mile upstream of the confluence with B. Everett Jordan Lake	Chatham County Chatham County
White Oak Creek Tributary <sup>1</sup>	The confluence with White Oak Creek/B. Everett Jordan Lake	Approximately 4,000 feet upstream of the confluence with White Oak Creek/B. Everett Jordan Lake	Chatham County
Wilkinson Creek	Approximately 500 feet downstream of Gilmore Road	Approximately 85 feet south of Chatham County/Orange County boundary	Chatham County
Wilkinson Creek <sup>1</sup>	The confluence with Haw River	Approximately 3,500 feet upstream of the confluence with Haw River	Chatham County
Windfall Branch <sup>1</sup>	The confluence with B. Everett Jordan Lake	Approximately 2,500 feet upstream of the confluence with B. Everett Jordan Lake	Chatham County

<sup>1</sup>Revised to reflect backwater effects from new detailed study

Table 8, "Flooding Sources Studied by Detailed Methods", lists all flooding sources within the county that were studied by detailed methods for this FIS and previous FISs.

**Table 8 - Flooding Sources Studied by Detailed Methods: Revised or Newly Studied**

Source	Riverine Sources		Affected Communities
	From	To	
Dry Creek	At the confluence with Haw River	Approximately 500 feet upstream of NC Highway 87	Chatham County
Haw River	At the confluence with Cape Fear River	Immediately downstream of B. Everett Jordan Lake Dam	Chatham County
Haw River	Jordan Lake	Approximately 0.5 mile upstream of the Guilford/Alamance County boundary	Chatham County Town Of Pittsboro
Indian Creek (into Deep River)	At the confluence with Deep River	Approximately 0.6 mile downstream of Roberts Chapel Road	Chatham County
Little Indian Creek	At the confluence with Indian Creek (into Deep River)	Approximately 2.3 miles upstream of confluence with Indian Creek (into Deep River)	Chatham County
Loves Creek	The confluence with Rocky River	Approximately 630 feet upstream of Pine Forest South Drive	Town Of Siler City
Loves Creek Tributary 1	At the confluence with Loves Creek	Approximately 400 feet upstream of US Highway 64	Town Of Siler City
Morris Branch	The confluence with Panther Creek	Approximately 0.7 mile upstream of confluence with Panther Creek	Chatham County Town Of Cary
Northeast Creek	Approximately 1,050 feet upstream of county boundary	Approximately 130 feet upstream of So-Hi Drive	Chatham County
Panther Creek	The confluence with Northeast Creek	At the Chatham County Boundary	Chatham County Town Of Cary
Pokeberry Creek	Approximately 1.2 miles downstream of US Highway 15-501	Approximately 1.4 miles upstream of Great Ridge Parkway	Chatham County
Robeson Creek	The confluence with Haw River / B. Everett Jordan Lake	Approximately 1,370 feet upstream of the Power Line Easement	Chatham County Town Of Pittsboro
Robeson Creek Tributary 3	At the confluence with Robeson Creek	Approximately 1,800 feet upstream of Oakwood Drive	Town Of Pittsboro
Rocky River	Approximately 0.25 mile downstream of US Highway 64	Approximately 0.25 mile upstream of Siler City Snow Camp Road (SR 1004)	Town Of Siler City
Rocky River Tributary 1	At the confluence with Rocky River	Approximately 800 feet upstream of Siler City Snow Camp Road	Town Of Siler City
Southwest Creek	The Durham/Chatham County boundary	Approximately 750 feet upstream of Ebon Road	Chatham County
Wilkinson Creek	Approximately 1,300 feet upstream of Andrews Store Road	Approximately 0.6 mile upstream of Lamont Norwood Road	Chatham County

Table 9, "Flooding Sources Studied by Detailed Methods: Redelineated" is not applicable in Chatham County.

Table 10, "Flooding Sources Studied by Detailed Methods: Limited Detailed", lists all flooding sources within the county that were studied by limited detailed methods for either this FIS or previous FISs.

**Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed**

Source	Riverine Sources		Affected Communities
	From	To	
B. Everett Jordan Lake	Entire shoreline within Chatham County (Unincorporated Areas)	Entire shoreline within Chatham County (Unincorporated Areas)	Chatham County Town Of Pittsboro
Bear Creek	The confluence with Rocky River	Approximately 2.7 miles upstream of confluence of Bear Creek Tributary 1	Chatham County
Bear Creek (into Indian Creek)	The confluence with Indian Creek (into Deep River)	Approximately 400 feet upstream of Bonlee Carbonton Road	Chatham County
Bear Creek Tributary 1	The confluence with Bear Creek	Approximately 0.5 mile upstream of confluence with Bear Creek	Chatham County
Beaver Creek Tributary 1	The confluence with B. Everett Jordan Lake	Approximately 1.3 miles upstream of Tody Goodwin Road	Chatham County
Beaver Creek Tributary 2	The confluence with B. Everett Jordan Lake	Approximately 1.1 miles upstream of Tody Goodwin Road	Chatham County
Beaver Creek Tributary 3	The confluence with B. Everett Jordan Lake	Approximately 0.6 mile upstream of confluence with B. Everett Jordan Lake	Chatham County
Blood Run Creek	At the confluence with Brush Creek	Approximately 1580 feet upstream of US 64	Town Of Siler City
Brooks Creek	Approximately 0.6 miles upstream of Old Graham Road	Approximately 400 feet upstream of NC 87	Chatham County
Brooks Creek	The confluence with Haw River	Approximately 0.6 mile upstream of Old Graham Road	Chatham County Town Of Pittsboro
Brooks Creek Tributary	Approximately 2,040 feet downstream of The Parks Drive	Approximately 1,175 feet upstream of The Parks Drive	Chatham County
Brooks Creek Tributary 1	The confluence with Brooks Creek	Approximately 970 feet upstream of Russells Chapel Church Road	Chatham County Town Of Pittsboro
Brush Creek	The confluence with Deep River	Approximately 0.4 mile upstream of Old Liberty Road	Town Of Siler City
Buckhorn Creek	The confluence with Cape Fear River	At Harris Reservoir Dam	Chatham County
Buckhorn Creek Tributary 1	The confluence with Buckhorn Creek	Approximately 0.6 mile upstream of confluence with Buckhorn Creek	Chatham County
Buckhorn Creek Tributary 2	The confluence with Buckhorn Creek	Approximately 0.7 mile upstream of confluence with Buckhorn Creek	Chatham County
Buckhorn Creek Tributary 3	The confluence with Buckhorn Creek	Approximately 530 feet upstream of Railroad	Chatham County
Buckhorn Creek Tributary 4	At Harris Reservoir	Approximately 0.4 mile upstream of confluence with Harris Reservoir	Chatham County
Bush Creek	The confluence with B. Everett Jordan Lake	Approximately 1.4 miles upstream of Big Woods Road	Chatham County
Cape Fear River	At the Lee/Harnett County boundary	At the confluence of Deep River	Chatham County
Cedar Creek	The confluence with Deep River	Approximately 1.2 miles upstream of Henry Oldham Road	Chatham County
Cedar Creek Tributary 1	The confluence with Cedar Creek	Approximately 1.4 miles upstream of Henry Oldham Road	Chatham County
Cedar Creek Tributary 2	The confluence with Cedar Creek Tributary 1	Approximately 0.4 mile upstream of an unnamed road	Chatham County
Collins Creek	Confluence with Haw River	Approximately 0.8 mile upstream of Orange Grove Road	Chatham County
Crooked Creek	Confluence with B. Everett Jordan Lake	Approximately 1,230 feet downstream of Chatham/Durham County boundary	Chatham County
Crows Creek	The confluence with Terrells Creek	Approximately 550 feet upstream of an unnamed road	Chatham County
Cub Creek	The confluence with B. Everett Jordan Lake	Approximately 1.0 mile upstream of Nature Trail Road	Chatham County
Deep River	The confluence with Cape Fear River	The Chatham/Moore County boundary	Chatham County
Deep River	The Moore/Chatham County boundary	The Moore/Randolph County boundary	Chatham County
Deep River Tributary 5	The confluence with Deep River	Approximately 0.5 mile upstream of Alton King Road	Chatham County
Deep River Tributary 6	The confluence with Deep River Tributary 5	Approximately 0.8 mile upstream of Alton King Road	Chatham County
Deep River Tributary 7	The confluence with Deep River	Approximately 1.7 miles upstream of Alton King Road	Chatham County
Deep River Tributary 8	The confluence with Deep River	Approximately 0.6 mile upstream of Alton King Road	Chatham County
Dry Creek	Approximately 470 feet upstream of NC 87	Approximately 0.8 mile upstream of White Smith Road	Chatham County
Dry Creek	The confluence with Haw River	Approximately 0.8 mile upstream of White Smith Road	Chatham County
East Price Creek	Approximately 530 feet downstream of Amber Wood Road	Approximately 0.6 mile upstream of the Chatham/Orange County boundary	Chatham County
Folkner Branch	The confluence with B. Everett Jordan Lake	Approximately 600 feet upstream of Farrells Creek Road	Chatham County
Georges Creek	The confluence with Deep River	Approximately 1,060 feet upstream of Henry Oldham Road	Chatham County

**Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed**

Source	Riverine Sources		Affected Communities
	From	To	
Georges Creek Tributary 1	The confluence with Georges Creek	Approximately 0.8 mile upstream of confluence with Georges Creek	Chatham County
Georges Creek Tributary 2	The confluence with Georges Creek	Approximately 1.1 miles upstream of confluence with Georges Creek	Chatham County
Greenbriar Creek	The confluence with Rocky River	Approximately 1.1 miles upstream of Staley Store Road	Chatham County
Gulf Creek	The confluence with Cape Fear River	Approximately 2.2 miles upstream of railroad	Chatham County
Harlands Creek	The confluence with Rocky River	Approximately 1.6 miles upstream of US 64	Chatham County Town Of Pittsboro
Harris Reservoir	Entire shoreline within Chatham County	Entire shoreline within Chatham County	Chatham County
Harts Creek	The confluence with Bear Creek (into Indian Creek)	Approximately 1.6 miles upstream of confluence with Bear Creek (into Indian Creek)	Chatham County
Herndon Creek	Approximately 0.8 miles upstream of Jack Bennett Road	Approximately 1.8 mile upstream of Jack Bennett Road	Chatham County
Herndon Creek	The confluence with Bush Creek	Approximately 0.8 mile upstream of Jack Bennett Road	Chatham County
Hill Creek	The confluence with Robeson Creek	Approximately 300 feet upstream of X-Campbell Road	Town Of Pittsboro
Indian Creek (into Deep River)	Approximately 1,950 feet upstream of the confluence of Bear Creek (into Indian Creek)	Approximately 1,060 feet upstream of Goldston Glendon Road	Chatham County
Kit Creek	The confluence with Northeast Creek	Approximately 1.7 miles upstream of confluence with Northeast Creek	Chatham County Town Of Cary
Lacy Creek	The confluence with Rocky River	Approximately 0.7 mile upstream of confluence of Rocky River	Town Of Siler City
Landrum Creek	The confluence with Rocky River	Approximately 500 feet upstream of Pleasant Hill Church Road	Chatham County
Landrum Creek Tributary	The confluence with Landrum Creek	Approximately 0.9 mile upstream of Jay Shambley Road	Chatham County
Lick Creek	The confluence with Terrells Creek (West)	Approximately 2.4 miles upstream of confluence with Terrells Creek West	Chatham County
Line Creek	The confluence with Deep River	Approximately 1.0 mile upstream of Goldston Carbonton Road	Chatham County
Little Brush Creek	The confluence with Brush Creek	Approximately 1.6 miles upstream of Jim Paige Road	Chatham County Town Of Siler City
Little Indian Creek	Approximately 2.1 miles upstream of the confluence with Indian Creek (into Deep River)	Approximately 1,060 feet upstream of Goldston Glendon Road	Chatham County
Long Branch	The confluence with Dry Creek	Approximately 1.5 miles upstream of NC 87	Chatham County
Loves Creek Tributary 2	The confluence with Loves Creek Tributary 1	Approximately 0.8 mile upstream of Garden Avenue	Town Of Siler City
Loves Creek Tributary 3	The confluence with Loves Creek Tributary 1	Approximately 400 feet upstream of Garden Avenue	Town Of Siler City
Meadow Branch	The confluence with Terrells Creek	Approximately 350 feet upstream of Jones Ferry Road	Chatham County
Meadow Creek	The confluence with Rocky River	Approximately 1.3 miles upstream of Rives Chapel Church Road	Chatham County
Mill Branch	The confluence with B. Everett Jordan Lake	Approximately 1,530 feet upstream of confluence with B. Everett Jordan Lake	Chatham County
Morgan Creek	The confluence with Jordan Lake	The Durham/Orange County boundary	Chatham County
Mud Lick Creek	The confluence with Rocky River	Approximately 0.6 mile upstream of Silk Hope Liberty Road	Chatham County
Nancy Branch	Approximately 0.4 mile upstream of confluence with Panther Creek	Approximately 0.1 miles upstream of Del Webb Avenue	Chatham County Town Of Cary
Nancy Branch	The confluence with Panther Creek	Approximately 0.4 mile upstream of confluence with Panther Creek	Chatham County
New Hope Creek	The Durham/Chatham County Boundary	Approximately 1,400 feet downstream of Old Chapel Hill Road	Chatham County
New Hope River Tributary 1	The confluence with B. Everett Jordan Lake	Approximately 1,480 feet upstream of B. Everett Jordan Lake	Chatham County
North Prong Rocky River	The confluence with Rocky River	Approximately 210 feet upstream of South Cook Street	Chatham County
Northeast Creek	The confluence with B. Everett Jordan Lake	Approximately 1,050 feet upstream of county boundary	Chatham County
Overcup Creek	The confluence with B. Everett Jordan Lake	Approximately 1.0 mile upstream of the confluence with Overcup Tributary	Chatham County
Overcup Creek Tributary	The confluence with Overcup Creek/B. Everett Jordan Lake	Approximately 1.0 mile upstream of the confluence with Overcup Creek/B. Everett Jordan Lake	Chatham County
Parkers Creek	The confluence with B. Everett Jordan Lake	Approximately 0.4 mile upstream of Big Woods Road	Chatham County

**Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed**

Source	Riverine Sources		Affected Communities
	From	To	
Persimmons Nursery Branch	The confluence with Collins Creek	Approximately 550 feet upstream of Collins Mountain Road	Chatham County
Pokeberry Creek	The confluence with Haw River	Approximately 1.0 mile upstream of Bynum Ridge Road	Chatham County
Reedy Fork	The confluence with Brush Creek	Approximately 0.4 mile upstream of Wrenn Smith Road	Town Of Siler City
Robeson Creek Tributary 1	The confluence with Robeson Creek	Approximately 1,800 feet upstream of Prince Creek Road	Town Of Pittsboro
Robeson Creek Tributary 2	The confluence with Robeson Creek Tributary 1	Approximately 480 feet upstream of Tom Womble Road	Town Of Pittsboro
Robeson Creek Tributary 3A	Oakwood Drive	Approximately 455 feet upstream of Hillsboro Street	Town Of Pittsboro
Robeson Creek Tributary 4	The confluence with Robeson Creek	Approximately 320 feet upstream of NC 87	Town Of Pittsboro
Robeson Creek Tributary 5	The confluence with Robeson Creek Tributary 4	Approximately 1.0 mile upstream of Arthur Alston Road	Chatham County Town Of Pittsboro
Rocky Branch (into Deep River)	The confluence with Deep River	Approximately 0.5 mile upstream of confluence with Deep River	Chatham County
Rocky Branch (into Georges Creek)	The confluence with Georges Creek	Approximately 0.6 mile upstream of Rosser Road	Chatham County
Rocky Ford Branch	The confluence with White Oak Creek	Approximately 0.7 mile upstream of Luther Road	Chatham County
Rocky River	Approximately 0.3 miles upstream of Siler City Snow Camp Road	Approximately 0.4 mile upstream of Dam	Chatham County Town Of Siler City
Rocky River	The confluence with Deep River	Approximately 0.25 miles downstream of Highway 64	Chatham County Town Of Siler City
Rocky River Tributary 1	The confluence with Rocky River	Approximately 1.0 mile upstream of Siler City Snow Camp Road	Town Of Siler City
Sandy Branch	The confluence with Bear Creek	Approximately 200 feet upstream of NC 902	Chatham County
Shaddox Creek	Approximately 565 feet downstream of New Elam Church Road	Approximately 1,170 feet downstream of Obler Road	Chatham County
Shaddox Creek	The confluence with Haw River	Approximately 2.5 miles upstream of US 1	Chatham County
South Fork	Confluence with Cane Creek (South)	Alamance/Chatham County boundary	Chatham County
Stinking Creek	The confluence with B. Everett Jordan Lake	Approximately 450 feet upstream of Talon Drive	Chatham County
Terrells Creek	The confluence with Haw River	The Chatham/Orange County boundary	Chatham County
Terrells Creek (West)	The confluence with Haw River	Approximately 1.5 miles upstream of Woody Store Road	Chatham County
Tick Creek	The confluence with Rocky River	Approximately 300 feet upstream of Siler City Glendon Road	Chatham County
Tick Creek Tributary	The confluence with Tick Creek	Approximately 0.6 mile upstream of confluence of Tick Creek	Chatham County
Tick Creek Tributary 1	The confluence with Tick Creek	Approximately 0.9 mile upstream of Mount Vernon Springs Road	Chatham County Town Of Siler City
Turkey Creek	The confluence with Robeson Creek	Approximately 2.9 miles upstream of US 15/US 501/NC 87	Town Of Pittsboro
Tysons Creek	The confluence with Deep River	Approximately 0.4 mile upstream of Mert McManess Road	Chatham County
Tysons Creek Tributary	The confluence with Tysons Creek	Approximately 0.8 mile upstream of NC Highway 42	Chatham County
Varnell Creek	The confluence with Rocky River	Approximately 2.3 miles upstream of US 64	Town Of Siler City
Weaver Creek	The confluence with B. Everett Jordan Lake	Approximately 1.9 miles upstream of confluence with B. Everett Jordan Lake	Chatham County
Weaver Creek Tributary	The confluence with B. Everett Jordan Lake	Approximately 1.2 miles upstream of confluence with B. Everett Jordan Lake	Chatham County
Welch Creek	The confluence with Tick Creek	Approximately 0.6 mile upstream of confluence with Tick Creek	Chatham County
West Price Creek	The Chatham/Orange County boundary	Approximately 1,920 feet upstream of Chatham/Orange County boundary	Chatham County
White Oak Creek Tributary 1	The confluence with White Oak Creek/B. Everett Jordan Lake	Approximately 1.0 mile upstream of confluence with White Oak Creek/B. Everett Jordan Lake	Chatham County
Wilkinson Creek	Approximately 500 feet downstream of Gilmore Road	Approximately 85 feet south of Chatham County/Orange County boundary	Chatham County
Wilkinson Creek	The confluence with Haw River	Approximately 0.6 mile south of Chatham County/Orange County boundary	Chatham County
Wilkinson Creek	The confluence with Haw River	Approximately 1300 feet upstream of Andrews Store Road	Chatham County
Windfall Branch	The confluence with B. Everett Jordan Lake	Approximately 0.6 mile upstream of confluence with Parkers Creek	Chatham County

Table 11, "Stream Name Changes" is not applicable in Chatham County.

Table 12, "Letters of Map Revision" is not applicable in Chatham County.

## 5.0 Engineering Methods

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2% annual chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

### 5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. For details on the county's hydrologic analyses, the hydrologic report is available by request.

A summary of the drainage area-peak discharge relationships for the flooding sources studied by detailed methods is shown in Table 13, "Summary of Discharges".

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
<b>Bear Creek</b>						
At the confluence with Rocky River	51.70	*	*	8775	*	*
Approximately 1,430 feet upstream of Woody Dam Road	51.50	*	*	8747	*	*
Approximately 210 feet upstream of Mays Chapel Road	50.50	*	*	8640	*	*
Approximately 0.6 mile upstream of Mays Chapel Road	49.50	*	*	8534	*	*
Approximately 0.8 mile downstream of Pittsboro-Goldston Road	48.50	*	*	8432	*	*
Approximately 0.4 mile upstream of Pittsboro-Goldston Road	47.50	*	*	8324	*	*
At the confluence of Harts Creek	43.60	*	*	7887	*	*
Approximately 0.5 mile upstream of the confluence of Harts Creek	43.20	*	*	7836	*	*
Approximately 480 feet upstream of Meronies Chapel Road	42.30	*	*	7734	*	*
Approximately 0.6 mile upstream of Meronies Chapel Road	41.30	*	*	7624	*	*
Approximately 0.8 mile downstream of Vernie Phillips Road	40.30	*	*	7509	*	*
Approximately 1,850 feet downstream of Vernie Phillips Road	39.80	*	*	7449	*	*
Approximately 0.5 mile upstream of Vernie Phillips Road	38.80	*	*	7335	*	*
Approximately 0.7 mile downstream of US 421	38.00	*	*	7238	*	*
Approximately 0.4 mile downstream of US 421	32.60	*	*	6578	*	*
Approximately 0.5 mile downstream of US 421	32.60	*	*	6581	*	*
Approximately 900 feet upstream of Ralph Sipe Road	31.60	*	*	6451	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1.3 miles upstream of Ralph Sipe Road	30.80	*	*	6345	*	*
Approximately 790 feet upstream of the confluence of Sandy Branch	25.50	*	*	5636	*	*
At the confluence of Sandy Branch	25.50	*	*	5637	*	*
Approximately 0.8 mile upstream of the confluence of Sandy Branch	25.10	*	*	5580	*	*
Approximately 0.9 mile upstream of the confluence of Sandy Branch	22.70	*	*	5243	*	*
Approximately 0.8 mile downstream of Bonlee School Road	22.50	*	*	5213	*	*
Approximately 1,000 feet upstream of Bonlee School Road	21.50	*	*	5069	*	*
Approximately 1,480 feet upstream of Bonlee School Road	14.80	*	*	4012	*	*
Approximately 1,210 feet downstream of NC 902	14.10	*	*	3898	*	*
Approximately 630 feet downstream of NC 902	11.90	*	*	3500	*	*
Approximately 0.7 mile downstream of Edwards Hill Church Road	10.90	*	*	3321	*	*
Approximately 0.4 mile upstream of confluence of Bear Creek Tributary 1	7.70	*	*	2604	*	*
Approximately 350 feet upstream of confluence of Bear Creek Tributary 1	7.70	*	*	2660	*	*
Approximately 1.0 mile upstream of confluence of Bear Creek Tributary 1	6.20	*	*	2325	*	*
Approximately 1.9 miles upstream of confluence of Bear Creek Tributary 1	5.30	*	*	2116	*	*
Approximately 2.5 miles upstream of confluence of Bear Creek Tributary 1	4.10	*	*	1798	*	*
<b>Bear Creek (into Indian Creek)</b>						
At the confluence with Indian Creek (into Deep River)	4.90	*	*	2008	*	*
Approximately 0.7 mile downstream of Goldston Glendon Road	3.80	*	*	1718	*	*
Approximately 0.5 mile upstream of Goldston Glendon Road	2.90	*	*	1435	*	*
<b>Bear Creek Tributary 1</b>						
Approximately 500 feet upstream of confluence with Bear Creek	2.60	*	*	1347	*	*
<b>Beaver Creek</b>						
At Chatham/Wake County boundary	19.20	*	*	5890	*	*
At the Chatham/Wake County boundary	19.20	2510	4790	5890	*	9280
<b>Beaver Creek Tributary 1</b>						
Approximately 1,370 feet downstream of Tody Goodwin Road	1.10	*	*	782	*	*
At the confluence with B. Everett Jordan Lake	1.10	*	*	811	*	*
Approximately 0.5 mile upstream of Tody Goodwin Road	0.50	*	*	484	*	*
<b>Beaver Creek Tributary 2</b>						
At the confluence with B. Everett Jordan Lake	2.40	*	*	1302	*	*
Approximately 0.4 mile downstream of Tody Goodwin Road	1.80	*	*	1085	*	*
Approximately 1,530 feet upstream of Tody Goodwin Road	1.40	*	*	907	*	*
<b>Beaver Creek Tributary 3</b>						
At the confluence with B. Everett Jordan Lake	0.10	*	*	211	*	*
<b>Blood Run Creek</b>						
At the Chatham/Randolph County boundary	7.90	*	*	2714	*	*
Approximately 0.5 mile upstream of Wrenn Smith Road	7.30	*	*	2590	*	*
Approximately 0.6 mile upstream of Wrenn Smith Road	6.00	*	*	2292	*	*
Approximately 1,430 feet upstream of an unnamed road	5.70	*	*	2222	*	*
Approximately 1.1 miles downstream of Old US Highway 64	4.70	*	*	1972	*	*
Approximately 0.5 mile downstream of Old US Highway 64	3.80	*	*	1724	*	*
Approximately 1,110 feet downstream of Old US Highway 64	3.20	*	*	1544	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1,210 feet downstream of Ellington Road	2.30	*	*	1264	*	*
Approximately 850 feet upstream of U.S. Highway 64	1.60	*	*	984	*	*
<b>Brooks Creek</b>						
At the confluence with Haw River	9.90	*	*	3118	*	*
Approximately 0.8 mile upstream of the confluence with Haw River	9.30	*	*	3007	*	*
<b>Brooks Creek Tributary</b>						
Immediately upstream of confluence with Brooks Creek	0.94	394	725	838	*	1160
Immediately downstream of The Parks Drive	0.84	374	689	796	*	1100
<b>Brooks Creek Tributary 1</b>						
Approximately 200 feet upstream of confluence with Brooks Creek	2.20	*	*	1234	*	*
Approximately 490 feet upstream of Russells Chapel Church Road	2.20	*	*	1226	*	*
<b>Brush Creek</b>						
At the Chatham/Randolph County boundary	19.60	*	*	4778	*	*
Approximately 1.0 mile upstream of Coleridge Road	18.60	*	*	4631	*	*
Approximately 0.5 mile downstream of Moons Chapel Road	17.60	*	*	4474	*	*
Approximately 480 feet downstream of Moons Chapel Road	16.60	*	*	4318	*	*
Approximately 1,320 feet upstream of Moons Chapel Road	16.20	*	*	4243	*	*
Approximately 0.5 mile upstream of Moons Chapel Road	14.50	*	*	3957	*	*
<b>Buckhorn Creek</b>						
Approximately 0.4 mile upstream of the confluence with Cape Fear River	80.10	*	*	16441	*	*
At the confluence of Buckhorn Creek Tributary 1	78.40	*	*	16232	*	*
Approximately 0.7 mile downstream of NC 42	78.10	*	*	16199	*	*
Approximately 1,480 feet downstream of NC 42	76.60	*	*	16016	*	*
Approximately 110 feet upstream of NC 42	76.50	*	*	15997	*	*
At the confluence of Buckhorn Creek Tributary 2	75.40	*	*	15858	*	*
At the confluence of Buckhorn Creek Tributary 3	71.20	*	*	15334	*	*
<b>Buckhorn Creek Tributary 1</b>						
Approximately 1,370 feet upstream of the confluence with Buckhorn Creek	0.30	*	*	313	*	*
At the confluence with Buckhorn Creek	0.30	*	*	342	*	*
<b>Buckhorn Creek Tributary 2</b>						
Approximately 900 feet upstream of the confluence with Buckhorn Creek	1.00	*	*	734	*	*
At the confluence with Buckhorn Creek	1.00	*	*	741	*	*
Approximately 0.4 mile upstream of the confluence with Buckhorn Creek	0.80	*	*	666	*	*
<b>Buckhorn Creek Tributary 3</b>						
At the confluence with Buckhorn Creek	4.00	*	*	1782	*	*
Approximately 0.7 mile upstream of the confluence with Buckhorn Creek	3.90	*	*	1737	*	*
Approximately 1.0 mile upstream of the confluence with Buckhorn Creek	3.60	*	*	1669	*	*
<b>Buckhorn Creek Tributary 4</b>						
Approximately 1,900 feet upstream of the confluence with Harris Reservoir	0.70	*	*	605	*	*
Approximately 0.7 mile upstream of the confluence with Harris Reservoir	0.60	*	*	549	*	*
<b>Bush Creek</b>						
At the confluence with B. Everett Jordan Lake	8.50	*	*	2832	*	*



**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
At the confluence of Herndon Creek	5.30	*	*	2107	*	*
Approximately 690 feet upstream of Big Woods Road	4.90	*	*	2018	*	*
Approximately 0.6 mile upstream of Big Woods Road	4.00	*	*	1762	*	*
<b>Cape Fear River</b>						
At the Chatham/Harnett County boundary	3324.20	*	*	79004	*	*
Approximately 0.5 mile upstream of the Chatham/Harnett County boundary	3242.80	*	*	78803	*	*
Approximately 1,800 feet downstream of NC 42	3216.50	*	*	77673	*	*
<b>Cedar Creek</b>						
Approximately 1.3 miles upstream of confluence with Deep River	11.30	*	*	3391	*	*
At the confluence of Cedar Creek Tributary 1	4.70	*	*	1970	*	*
Approximately 0.4 mile upstream of Henry Oldham Road	4.10	*	*	1812	*	*
<b>Cedar Creek Tributary 1</b>						
At the confluence with Cedar Creek	5.60	*	*	2177	*	*
At the confluence of Cedar Creek Tributary 2	3.80	*	*	1702	*	*
Approximately 1.0 mile upstream of the confluence of Cedar Creek Tributary 2	3.10	*	*	1499	*	*
<b>Cedar Creek Tributary 2</b>						
At the confluence with Cedar Creek Tributary 1	1.30	*	*	870	*	*
<b>Collins Creek</b>						
At the confluence with Haw River	19.60	*	*	4779	*	*
At the confluence of Persimmons Nursery Branch	16.20	*	*	4253	*	*
<b>Crows Creek</b>						
At the confluence with Terrells Creek	2.60	*	*	1365	*	*
Approximately 0.5 mile downstream of Jones Ferry Road	2.10	*	*	1175	*	*
Approximately 110 feet downstream of unnamed road	1.20	*	*	823	*	*
<b>Cub Creek</b>						
At the confluence with B. Everett Jordan Lake	8.50	*	*	2828	*	*
Approximately 0.9 mile downstream of Old Farrington Point Road	7.60	*	*	2657	*	*
Approximately 210 feet downstream of Old Farrington Point Road	6.70	*	*	2445	*	*
Approximately 0.5 mile upstream of Old Farrington Point Road	5.80	*	*	2228	*	*
Approximately 0.6 mile upstream of Nature Trail Road	5.00	*	*	2026	*	*
<b>Deep River</b>						
At the confluence with Cape Fear River	1385.40	*	*	54900	*	*
Approximately 1.1 miles downstream of the confluence of Rocky Branch (into Deep River)	1377.30	*	*	54600	*	*
At the confluence of Rocky Branch (into Deep River)	1369.50	*	*	54500	*	*
Approximately 1.3 miles upstream of the confluence of Rocky Branch (into Deep River)	1125.30	*	*	53200	*	*
At the confluence of Little Buffalo Creek	1109.70	*	*	53100	*	*
At the confluence of Georges Creek	1107.30	*	*	52900	*	*
At the confluence of Big Buffalo Creek	1085.00	*	*	52700	*	*
At the confluence of Cedar Creek	1070.00	*	*	52600	*	*
At the confluence of Patterson Creek	1069.00	*	*	52500	*	*
At the confluence of Pocket Creek	1067.70	*	*	52000	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
At the confluence of Indian Creek (into Deep River)	1064.10	*	*	51900	*	*
At the confluence of Smith Creek	1037.30	*	*	51600	*	*
At the Chatham/Moore County boundary	1036.60	*	*	51500	*	*
<b>Deep River Tributary 5</b>						
At the confluence of Deep River	0.50	*	*	511	*	*
<b>Deep River Tributary 6</b>						
At the confluence with Deep River Tributary 5	0.90	*	*	701	*	*
<b>Deep River Tributary 7</b>						
At the confluence with Deep River	1.90	*	*	1103	*	*
Approximately 1.0 mile upstream of Alton King Road	1.10	*	*	783	*	*
<b>Deep River Tributary 8</b>						
At the confluence with Deep River	0.70	*	*	601	*	*
<b>Dry Creek</b>						
Immediately upstream of confluence with Haw River	20.73	2580	4070	4700	*	6270
Approximately 2.3 miles downstream of Old Graham Road	19.23	2470	3890	4490	*	6010
Approximately 1.0 mile downstream of Old Graham Road	18.40	2400	3790	4380	*	5850
Immediately downstream of Old Graham Road	17.72	2350	3710	4280	*	5730
Approximately 0.7 mile upstream of Old Graham Road	16.09	2210	3500	4040	*	5410
Approximately 0.8 mile downstream of NC Highway 87	11.98	1840	2930	3390	*	4560
Immediately downstream of NC Highway 87	11.67	1810	2890	3340	*	4490
Approximately 0.7 mile upstream of NC 87	11.00	*	*	3325	*	*
Approximately 0.4 mile downstream of Emerson Cook Road	10.00	*	*	3136	*	*
Approximately 420 feet upstream of Emerson Cook Road	9.00	*	*	2943	*	*
Approximately 210 feet upstream of W R Clark Road	8.10	*	*	2763	*	*
Approximately 1,800 feet downstream of Silk Hope Gumspring Road	7.40	*	*	2595	*	*
Approximately 160 feet downstream of Silk Hope Gumspring Road	6.70	*	*	2449	*	*
Approximately 0.6 mile upstream of Silk Hope Gumspring Road	6.00	*	*	2278	*	*
Approximately 1,210 feet upstream of Bowers Store Road	3.60	*	*	1649	*	*
Approximately 0.8 mile upstream of Bowers Store Road	0.90	*	*	679	*	*
<b>Folkner Branch</b>						
At the confluence with B. Everett Jordan Lake	1.90	*	*	1120	*	*
Approximately 1,640 feet downstream of M. T. Holland Road	1.00	*	*	765	*	*
<b>Georges Creek</b>						
At the confluence with Deep River	10.70	*	*	3681	*	*
Approximately 0.8 mile upstream of the confluence with Deep River	10.60	*	*	3653	*	*
At the confluence of Georges Creek Tributary 1	10.10	*	*	3494	*	*
At the confluence of Georges Creek Tributary 2	10.00	*	*	3133	*	*
Approximately 0.7 mile upstream of Georges Creek Tributary 2	9.60	*	*	3065	*	*
At the confluence of Rocky Branch (into Georges Creek)	4.50	*	*	1920	*	*
Approximately 1.6 miles upstream of Rocky Branch (into Georges Creek)	3.20	*	*	1539	*	*
Approximately 2.2 miles upstream of Rocky Branch (into Georges Creek)	3.00	*	*	1467	*	*
<b>Georges Creek Tributary 1</b>						
At the confluence with Georges Creek	0.40	*	*	409	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
<b>Georges Creek Tributary 2</b>						
At the confluence with Georges Creek	1.80	*	*	1064	*	*
Approximately 0.8 mile upstream of the confluence with Georges Creek	1.50	*	*	974	*	*
<b>Greenbriar Creek</b>						
At the confluence with Rocky River	9.00	*	*	2951	*	*
Approximately 0.4 mile upstream of the confluence with Rocky River	8.70	*	*	2878	*	*
Approximately 740 feet downstream of Silk Hope Liberty Road	7.80	*	*	2699	*	*
Approximately 110 feet upstream of Silk Hope Liberty Road	6.20	*	*	2339	*	*
Approximately 0.9 mile downstream of Staley Snow Camp Road	5.70	*	*	2218	*	*
Alamance/Chatham County boundary	3.70	*	*	1693	*	*
<b>Gulf Creek</b>						
Approximately 1.2 miles upstream of the confluence with Cape Fear River	6.60	*	*	2430	*	*
Approximately 160 feet upstream of Railroad	5.80	*	*	2247	*	*
Approximately 1.2 miles upstream of railroad	4.30	*	*	1864	*	*
<b>Harlands Creek</b>						
At the confluence with Rocky River	15.80	*	*	4180	*	*
Approximately 1.0 mile upstream of the confluence with Rocky River	15.00	*	*	4047	*	*
Approximately 2.1 miles upstream of the confluence with Rocky River	14.20	*	*	3918	*	*
Approximately 0.5 mile downstream of NC 902	13.40	*	*	3780	*	*
Approximately 0.4 mile upstream of NC 902	12.50	*	*	3604	*	*
Approximately 1,850 feet downstream of Alston Chapel Road	11.50	*	*	3424	*	*
Approximately 1,580 feet upstream of Alston Chapel Road	10.90	*	*	3307	*	*
Approximately 0.9 mile downstream of US 64	10.00	*	*	3148	*	*
Approximately 740 feet downstream of US 64	9.10	*	*	2962	*	*
Approximately 370 feet downstream of US 64	7.80	*	*	2683	*	*
Approximately 1,380 feet upstream of US 64	7.60	*	*	2642	*	*
Approximately 0.7 mile upstream of US 64	6.60	*	*	2418	*	*
Approximately 0.9 mile upstream of US 64	4.00	*	*	1784	*	*
Approximately 1.1 miles upstream of US 64	2.30	*	*	1245	*	*
<b>Harts Creek</b>						
At the confluence with Bear Creek (into Indian Creek)	3.10	*	*	1508	*	*
Approximately 1.3 miles upstream of the confluence with Bear Creek (into Indian Creek)	2.50	*	*	1333	*	*
<b>Haw River</b>						
Immediately downstream of Jordan Lake Dam	1707.46	16400	17400	18000	*	20300
Approximately 1.9 miles downstream of US Highway 64	1299.91	43800	63000	71100	*	91400
Immediately downstream of US Highway 15-501	1272.11	43700	62800	70800	*	91100
Approximately 400 feet upstream of US Highway 15-501	1262.20	43300	62200	70200	*	90400
Immediately upstream of confluence of Dry Creek	1229.05	42000	60500	68300	*	87900
Immediately upstream of confluence of Terrells Creek	1210.84	41300	59600	67200	*	86500
<b>Herndon Creek</b>						
Approximately 0.8 mile upstream of Jack Bennett Road (SR 1717)	1.81	574	943	1100	*	1510
Approximately 0.9 mile upstream of Jack Bennett Road (SR 1717)	1.72	556	915	1070	*	1470

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1.6 miles upstream of Jack Bennett Road (SR 1717)	1.00	398	661	776	*	1070
<b>Hill Creek</b>						
At the confluence with Robeson Creek	1.40	*	*	928	*	*
Approximately 690 feet upstream of US 64 Business	1.20	*	*	855	*	*
Approximately 420 feet upstream of Dogwood Lane	0.30	*	*	357	*	*
<b>Indian Creek (into Deep River)</b>						
Immediately upstream of confluence with Deep River	26.01	2970	4670	5380	*	7160
Immediately downstream of Railroad	25.74	2950	4640	5340	*	7120
Immediately downstream of Goldston Carbonton Road	25.30	2920	4590	5290	*	7050
Approximately 1,400 feet upstream of Goldston Carbonton Road	13.28	1960	3120	3610	*	4840
Approximately 1.2 miles downstream of Roberts Chapel Road	12.66	1910	3030	3510	*	4710
<b>Kit Creek</b>						
At the confluence with Northeast Creek	9.80	*	*	3105	*	*
Approximately 0.8 mile upstream of the confluence with Northeast Creek	9.50	*	*	3039	*	*
Approximately 1.4 miles upstream of the confluence with Northeast Creek	8.60	*	*	2861	*	*
At Chatham/Wake County boundary	8.00	1295	2570	3400	*	6160
<b>Lacy Creek</b>						
At the confluence with Rocky River	4.30	*	*	1854	*	*
Approximately 0.5 mile upstream of a dam	3.90	*	*	1747	*	*
<b>Landrum Creek</b>						
At the confluence with Rocky River	17.50	*	*	4456	*	*
Approximately 1.1 miles downstream of NC 902	17.10	*	*	4397	*	*
Approximately 1.1 miles downstream of NC 902	14.80	*	*	4018	*	*
Approximately 110 feet upstream of NC 902	14.40	*	*	3941	*	*
Approximately 0.9 mile downstream of Hadley Mill Road	13.40	*	*	3771	*	*
Approximately 0.4 mile downstream of Hadley Mill Road	12.40	*	*	3593	*	*
Approximately 1,740 feet downstream of Hadley Mill Road	11.20	*	*	3377	*	*
At the confluence of Landrum Creek Tributary	4.30	*	*	1864	*	*
Approximately 0.7 mile downstream of Jay Shambley Road	3.50	*	*	1635	*	*
Approximately 1,210 feet downstream of Pleasant Hill Church Road	2.50	*	*	1328	*	*
<b>Landrum Creek Tributary</b>						
At the confluence with Landrum Creek	6.20	*	*	2322	*	*
Approximately 0.4 mile upstream of Jay Shambley Road	5.60	*	*	2184	*	*
Approximately 0.6 mile upstream of Jay Shambley Road	2.50	*	*	1321	*	*
Approximately 0.9 mile upstream of Jay Shambley Road	2.30	*	*	1263	*	*
<b>Lick Creek</b>						
At the confluence with Terrells Creek (West)	6.00	*	*	2284	*	*
Approximately 0.5 mile upstream of the confluence with Terrells Creek (West)	5.70	*	*	2216	*	*
Approximately 1.9 miles upstream of the confluence with Terrells Creek (West)	4.70	*	*	1968	*	*
<b>Line Creek</b>						
At the confluence with Deep River	2.20	*	*	1210	*	*
Approximately 0.4 mile downstream of Lakewood Falls	0.80	*	*	672	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
<b>Little Brush Creek</b>						
Approximately 0.5 mile downstream of Lanes Mill Road	19.00	*	*	4700	*	*
At the Chatham/Randolph County boundary	17.30	*	*	4429	*	*
Approximately 740 feet upstream of the Chatham/Randolph County boundary	16.40	*	*	4287	*	*
Approximately 0.5 mile upstream of Jim Gilland Road	15.50	*	*	4133	*	*
Approximately 0.6 mile upstream of Jim Gilland Road	13.60	*	*	3799	*	*
Approximately 0.9 mile upstream of Jim Gilland Road	9.10	*	*	2955	*	*
Approximately 0.8 mile downstream of Airport Road	8.80	*	*	2908	*	*
Approximately 0.4 mile downstream of Airport Road	7.80	*	*	2698	*	*
Approximately 1.2 miles downstream of Jim Paige Road	7.10	*	*	2532	*	*
Approximately 1.0 mile downstream of Jim Paige Road	6.10	*	*	2303	*	*
Approximately 0.9 mile downstream of Jim Paige Road	5.20	*	*	2091	*	*
Approximately 0.5 mile downstream of Jim Paige Road	5.00	*	*	2050	*	*
Approximately 1,740 feet downstream of Jim Paige Road	4.10	*	*	1786	*	*
Approximately 0.5 mile upstream of Jim Paige Road	3.60	*	*	1650	*	*
Approximately 1.3 miles upstream of Jim Paige Road	2.60	*	*	1352	*	*
<b>Little Indian Creek</b>						
Confluence with Indian Creek (into Deep River)	10.84	1730	2760	3200	*	4300
Approximately 1.6 miles upstream of confluence with Indian Creek	9.70	1620	2580	2990	*	4030
Approximately 2.1 miles upstream of confluence with Indian Creek	9.57	1600	2560	2970	*	4000
<b>Long Branch</b>						
At the confluence with Dry Creek	2.30	*	*	1267	*	*
Approximately 1,530 feet downstream of NC 87	2.00	*	*	1163	*	*
Approximately 1.3 miles upstream of NC 87	1.10	*	*	788	*	*
<b>Loves Creek</b>						
At the confluence with Rocky River	8.20	1640	2690	3040	*	4030
Approximately 0.4 mile upstream of the confluence with Rocky River	8.10	1620	2660	3010	*	3990
Approximately 1.3 miles downstream of South Second Avenue	7.60	1360	2310	2640	*	3590
Approximately 0.7 mile downstream of South Second Avenue	5.80	1280	2140	2430	*	3270
At the confluence of Loves Creek Tributary 1	3.30	737	1290	1570	*	2390
Approximately 790 feet upstream of Fayetteville Avenue	2.90	668	1170	1430	*	2190
Approximately 0.6 mile upstream of Fayetteville Avenue	2.00	522	925	1140	*	1750
Approximately 110 feet downstream of Pine Forest South Drive	1.10	364	653	808	*	1250
<b>Loves Creek Tributary 1</b>						
Immediately upstream of confluence with Loves Creek	2.16	1140	1780	1970	*	2590
Immediately downstream of Fayetteville Avenue	2.05	1100	1730	1910	*	2510
Immediately downstream of S Chatham Avenue	1.96	1060	1660	1840	*	2420
Immediately downstream of W Raleigh Street	1.89	1020	1610	1780	*	2350
Immediately downstream of W Second Street	1.13	794	1260	1400	*	1850
Approximately 100 feet downstream of W Fifth Street	1.03	722	1170	1290	*	1720
Immediately downstream of E Sixth Street	0.36	384	647	721	*	973
Immediately downstream of E Seventh Street	0.33	348	594	665	*	901
Immediately downstream of Cottage Grove Avenue	0.28	312	538	603	*	820

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Immediately downstream of US Highway 64	0.23	257	454	512	*	701
<b>Loves Creek Tributary 2</b>						
At the confluence with Loves Creek Tributary 1	0.70	*	*	616	*	*
Approximately 1,480 feet upstream of Garden Avenue	0.30	*	*	370	*	*
<b>Loves Creek Tributary 3</b>						
At the confluence of Loves Creek Tributary 1	0.60	*	*	554	*	*
<b>Meadow Branch</b>						
At the confluence with Terrells Creek	3.20	*	*	1541	*	*
Approximately 790 feet downstream of Jones Ferry Road	2.70	*	*	1374	*	*
<b>Meadow Creek</b>						
At the confluence with Rocky River	5.60	*	*	2194	*	*
Approximately 370 feet upstream of Rives Chapel Church Road	4.90	*	*	2006	*	*
<b>Mill Branch</b>						
At the confluence with B. Everett Jordan Lake	1.40	*	*	925	*	*
<b>Morgan Creek</b>						
At the confluence with Jordan Lake	47.70	*	*	11200	*	*
<b>Morris Branch</b>						
At the confluence with Panther Creek	1.55	819	1340	1490	*	1990
Approximately 1,550 feet upstream of the confluence with Panther Creek	1.52	815	1330	1480	*	1980
Approximately 1,550 feet upstream of the confluence with Panther Creek	1.46	794	1300	1450	*	1930
At Chatham/Wake County boundary	1.40	821	1380	1730	2400	2730
<b>Mud Lick Creek</b>						
At the confluence with Rocky River	8.50	*	*	2845	*	*
Approximately 950 feet downstream of R.C. Overman Road	8.00	*	*	2729	*	*
Approximately 320 feet upstream of an unnamed road	4.70	*	*	1969	*	*
Approximately 0.5 mile downstream of Silk Hope Liberty Road	3.80	*	*	1722	*	*
Approximately 690 feet upstream of Silk Hope Liberty Road	3.40	*	*	1595	*	*
Approximately 0.6 mile upstream of Silk Hope Liberty Road	2.50	*	*	1317	*	*
<b>Nancy Branch</b>						
Approximately 0.5 mile upstream of the confluence with Panther Creek	1.86	715	1230	1390	*	1890
Approximately 0.7 mile upstream of the confluence with Panther Creek	1.63	682	1170	1320	*	1790
Approximately 1,620 feet downstream of Del Webb Avenue	1.53	666	1140	1290	*	1750
Approximately 410 feet downstream of Del Webb Avenue	1.23	567	985	1120	*	1530
Approximately 380 feet upstream of Del Webb Avenue	1.07	521	910	1040	*	1410
<b>New Hope River Tributary 1</b>						
At the confluence with B. Everett Jordan Lake	0.10	*	*	154	*	*
<b>North Prong Rocky River</b>						
At the confluence with Rocky River	12.90	*	*	3676	*	*
Approximately 1.3 miles upstream of the confluence with Rocky River	12.10	*	*	3545	*	*
Approximately 0.4 mile downstream of Staley Snow Camp Road	11.20	*	*	3363	*	*
Approximately 1,160 feet downstream of Staley Snow Camp Road	10.20	*	*	3174	*	*
Approximately 0.5 mile upstream of Staley Snow Camp Road	9.60	*	*	3061	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1,000 feet upstream of Ben Smith Road	8.60	*	*	2862	*	*
<b>Northeast Creek</b>						
At the confluence with B. Everett Jordan Lake	46.00	*	*	10600	*	*
At the confluence of Panther Creek	35.90	*	*	10000	*	*
Approximately 530 feet downstream of O Kelly Church Road	35.00	*	*	9940	*	*
Approximately 690 feet upstream of O Kelly Church Road	34.00	*	*	9880	*	*
At the confluence of Kit Creek	23.50	*	*	9060	*	*
<b>Overcup Creek</b>						
At the confluence with B. Everett Jordan Lake	0.90	*	*	696	*	*
Approximately 1.2 miles upstream of the confluence with B. Everett Jordan Lake	0.40	*	*	435	*	*
<b>Overcup Creek Tributary</b>						
At the confluence with Overcup Creek/B. Everett Jordan Lake	1.00	*	*	755	*	*
<b>Panther Creek</b>						
At the confluence with Northeast Creek	8.90	*	*	2931	*	*
Approximately 0.4 mile upstream of the confluence with Northeast Creek	8.70	*	*	2874	*	*
Approximately 0.5 mile upstream of the confluence with Northeast Creek	8.68	2110	3280	3650	*	4780
Approximately 0.7 mile upstream of the confluence with Northeast Creek	8.40	2100	3250	3620	*	4740
Approximately 1.0 mile upstream of the confluence with Northeast Creek	8.07	2080	3220	3580	*	4680
Approximately 930 feet downstream of the confluence of Nancy Branch	7.89	2060	3190	3550	*	4640
At the confluence of Nancy Branch	5.80	*	*	2233	*	*
Just upstream of the confluence of Nancy Branch	5.48	1710	2660	2960	*	3880
At the confluence of Morris Branch	3.90	*	*	1741	*	*
Just upstream of the confluence of Morris Branch	3.89	1320	2110	2360	*	3120
Approximately 1,200 feet upstream of the confluence of Morris Branch	3.84	1300	2080	2330	*	3090
Approximately 0.5 mile upstream of the confluence of Morris Branch	3.74	1280	2050	2300	*	3040
Approximately 0.6 mile upstream of the confluence of Morris Branch	3.70	*	*	1688	*	*
<b>Parkers Creek</b>						
At the confluence with B. Everett Jordan Lake	1.90	*	*	1121	*	*
<b>Persimmons Nursery Branch</b>						
At the confluence with Collins Creek	2.50	*	*	1320	*	*
<b>Pokeberry Creek</b>						
Approximately 1.1 miles downstream of Karen Calhoun Road	10.55	1700	2720	3150	*	4230
Approximately 1.1 miles downstream of Karen Calhoun Road	8.81	1490	2510	2870	*	3870
Approximately 1,600 feet downstream of Karen Calhoun Road	8.05	1400	2380	2720	*	3680
Immediately downstream of Karen Calhoun Road	7.22	1330	2250	2580	*	3480
Immediately downstream of US Highway 15	7.21	1330	2250	2580	*	3480
Immediately downstream of Morris Road	6.41	1190	2040	2350	*	3180
Approximately 800 feet upstream of Morris Road	5.58	1130	1940	2220	*	3010
Approximately 1,900 feet downstream of Andrews Store Road	4.52	1030	1770	2030	*	2750
Immediately downstream of Andrews Store Road	4.01	950	1640	1890	*	2570
Approximately 1,100 feet upstream of Andrews Store Road	3.36	833	1460	1680	*	2290
Approximately 0.8 mile downstream of Briar Chapel Parkway	2.95	791	1390	1590	*	2170

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 2,300 feet downstream of Briar Chapel Parkway	2.55	716	1270	1460	*	2000
Approximately 1,700 feet upstream of Briar Chapel Parkway	1.71	675	1120	1320	*	1830
Approximately 200 feet downstream of Great Ridge Parkway	0.80	347	578	680	*	941
Approximately 1,800 feet upstream of Great Ridge Parkway	0.70	319	533	628	*	870
Approximately 2,700 feet upstream of Great Ridge Parkway	0.48	253	425	502	*	698
Approximately 1,400 feet downstream of Cart Path at Hole 9 of Twin Lakes Golf Course	0.28	183	357	416	*	585
Approximately 400 feet downstream of Cart Path at Hole 9 of Twin Lake Golf Course	0.20	175	333	385	*	538
Immediately downstream of Cart Path at Hole 9 of Twin Lakes Golf Course	0.08	80	173	203	*	293
Immediately downstream of Cart Path at Hole 8 of Twin Lakes Golf Course	0.07	70	144	172	*	245
Immediately downstream of Cart Path at Hole 7 of Twin Lakes Golf Course	0.05	50	116	139	*	203
Immediately downstream of Private Drive at 62 Willow Way	0.03	40	90	105	*	153
<b>Reedy Fork</b>						
At the Chatham/Randolph County boundary	1.70	*	*	1038	*	*
Approximately 420 feet upstream of Wrenn Smith Road	1.20	*	*	832	*	*
<b>Robeson Creek</b>						
At the confluence with Jordan Lake	28.80	3090	5080	6080	*	8850
Approximately 0.5 mile upstream of the confluence with Jordan Lake	28.30	3060	5030	6020	*	8770
Approximately 0.4 mile downstream of the confluence of Robeson Creek Tributary 1	24.40	2770	4580	5490	*	8020
At the confluence of Robeson Creek Tributary 1	22.20	2600	4310	5170	*	7570
Approximately 630 feet upstream of the confluence of Robeson Creek Tributary 1	21.50	2550	4220	5070	*	7420
Approximately 1,160 feet upstream of the confluence of Robeson Creek Tributary 1	20.80	2490	4140	4970	*	7280
Approximately 1,060 feet downstream of the confluence of Turkey Creek	16.30	2120	3540	4260	*	6270
At the confluence of Turkey Creek	11.60	1690	2860	3450	*	5120
At the confluence of Robeson Creek Tributary 3	8.10	1330	2270	2750	*	4110
Approximately 110 feet downstream of the confluence of Hill Creek	6.30	1120	1930	2340	*	3520
At the confluence of Robeson Creek Tributary 4	1.30	394	705	870	*	1350
Approximately 0.5 mile downstream of the confluence of Power Line Easement	0.30	160	296	371	*	590
<b>Robeson Creek Tributary 1</b>						
At the confluence with Robeson Creek	2.10	*	*	1193	*	*
Approximately 530 feet upstream of the confluence with Robeson Creek	2.00	*	*	1141	*	*
At the confluence of Robeson Creek Tributary 2	0.60	*	*	555	*	*
Approximately 420 feet upstream of US 64	0.20	*	*	289	*	*
<b>Robeson Creek Tributary 2</b>						
At the confluence with Robeson Creek Tributary 1	1.00	*	*	755	*	*
Approximately 0.6 mile upstream of Love Street	0.30	*	*	378	*	*
<b>Robeson Creek Tributary 3</b>						
Immediately downstream of Pittsboro Elementary School Road	1.74	661	1150	1310	*	1780
Immediately upstream of confluence with Robeson Creek	1.74	662	1150	1310	*	1780
Immediately downstream of West Street	1.60	555	994	1140	*	1570



**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Immediately downstream of Salisbury Street	1.57	525	950	1100	*	1520
Approximately 900 feet upstream of Salisbury Street	1.50	494	903	1050	*	1450
Approximately 1,200 feet downstream of Oakwood Drive	1.30	422	789	919	*	1280
Immediately downstream of Oakwood Drive	0.55	275	462	544	*	756
<b>Robeson Creek Tributary 3A</b>						
Approximately 200 feet upstream of Hillcrest Drive	0.22	196	370	427	*	596
Immediately downstream of Hillsboro Street	0.18	161	310	358	*	502
<b>Robeson Creek Tributary 4</b>						
At the confluence with Robeson Creek	4.50	*	*	1916	*	*
At the confluence of Robeson Creek Tributary 5	2.10	*	*	1175	*	*
Approximately 1,640 feet upstream of US 64 Business	1.30	*	*	877	*	*
Approximately 0.7 mile downstream of Mitchells Chapel Road	0.40	*	*	393	*	*
<b>Robeson Creek Tributary 5</b>						
At the confluence with Robeson Creek Tributary 4	1.90	*	*	1096	*	*
Approximately 110 feet downstream of Old Siler City Road	1.00	*	*	746	*	*
Approximately 1,640 feet upstream of Arthur Alston Road	0.30	*	*	386	*	*
<b>Rocky Branch (into Deep River)</b>						
At the confluence with Deep River	5.00	*	*	2036	*	*
<b>Rocky Branch (into Georges Creek)</b>						
At the confluence with Georges Creek	4.10	*	*	1796	*	*
Approximately 160 feet upstream of an unnamed road	3.50	*	*	1636	*	*
Approximately 210 feet downstream of Rosser Road	2.50	*	*	1333	*	*
Approximately 0.5 mile upstream of Rosser Road	1.60	*	*	990	*	*
<b>Rocky Ford Branch</b>						
At the confluence with White Oak Creek	3.40	*	*	1600	*	*
Approximately 480 feet upstream of Luther Road	3.00	*	*	1470	*	*
<b>Rocky River</b>						
At the confluence with Deep River	243.30	*	*	23096	*	*
Approximately 0.5 mile upstream of the confluence with Deep River	242.50	*	*	23046	*	*
Approximately 1.1 miles upstream of the confluence with Deep River	238.50	*	*	23001	*	*
Approximately 1.5 miles downstream of US 15/NC 501	237.90	*	*	22807	*	*
Approximately 1,690 feet downstream of US 15/NC 501	235.30	*	*	22773	*	*
Approximately 0.6 mile upstream of US 15/NC 501	234.70	*	*	22615	*	*
Approximately 530 feet upstream of Chatham Church Road	233.70	*	*	22579	*	*
Approximately 1,740 feet upstream of Chatham Church Road	181.80	*	*	22520	*	*
At the confluence of Bear Creek	181.10	*	*	19251	*	*
Approximately 1.9 miles downstream of Pittsboro Goldston Road	178.60	*	*	19202	*	*
Approximately 1.7 miles downstream of Pittsboro Goldston Road	177.80	*	*	19037	*	*
Approximately 1.0 mile downstream of Pittsboro Goldston Road	177.10	*	*	18981	*	*
Approximately 1,580 feet downstream of Pittsboro-Goldston Road	173.60	*	*	18939	*	*
Approximately 1,160 feet downstream of Pittsboro-Goldston Road	173.00	*	*	18701	*	*
Approximately 0.5 mile downstream of the confluence of Harlands Creek	156.20	*	*	18658	*	*
At the confluence of Harlands Creek	154.30	*	*	17505	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 0.5 mile downstream of the confluence of Landrum Creek	136.60	*	*	17371	*	*
At the confluence of Landrum Creek	134.60	*	*	16097	*	*
Approximately 0.5 mile downstream of NC 902	131.20	*	*	15950	*	*
Approximately 0.4 mile upstream of NC 902	130.90	*	*	15697	*	*
Approximately 0.8 mile upstream of NC 902	127.70	*	*	15680	*	*
Approximately 1.9 miles downstream of the confluence of Tick Creek	126.00	*	*	15433	*	*
Approximately 1.0 mile downstream of the confluence of Tick Creek	104.00	*	*	15309	*	*
At the confluence of Tick Creek	103.50	*	*	13580	*	*
Approximately 0.6 mile downstream of the confluence of Meadow Creek	96.90	*	*	13540	*	*
At the confluence of Meadow Creek	96.50	*	*	12991	*	*
Approximately 1,370 feet upstream of the confluence of Meadow Creek	95.50	*	*	12957	*	*
Approximately 0.4 mile downstream of Rives Chapel Church Road	95.30	*	*	12874	*	*
Approximately 850 feet downstream of Rives Chapel Church Road	94.40	*	*	12856	*	*
Approximately 0.8 mile upstream of Rives Chapel Church Road	93.40	*	*	12780	*	*
Approximately 0.9 mile upstream of Rives Chapel Church Road	91.10	*	*	12696	*	*
Approximately 1.7 miles upstream of Rives Chapel Church Road	90.80	*	*	12503	*	*
Approximately 0.7 mile downstream of the confluence of Varnell Creek	79.90	*	*	12475	*	*
At the confluence of Varnell Creek	79.00	*	*	11517	*	*
Approximately 1,900 feet upstream of the confluence of Varnell Creek	78.50	*	*	11434	*	*
Approximately 0.8 mile downstream of confluence of Loves Creek	69.51	5450	8420	9640	*	12700
Approximately 400 feet downstream of US Highway 64	69.44	5450	8410	9640	*	12700
Immediately upstream of confluence with Rocky River Tributary 1	66.99	5330	8230	9430	*	12400
Approximately 1.5 miles downstream of Siler City Snow Camp Road	65.18	5240	8100	9280	*	12200
Approximately 0.6 mile downstream of Siler City Snow Camp Road	57.13	4830	7480	8580	*	11300
Approximately 200 feet downstream of Siler City Snow Camp Road	56.62	4800	7440	8540	*	11300
Approximately 0.6 mile downstream of Siler City Snow Camp Road	56.50	*	*	9332	*	*
Approximately 1,160 feet upstream of Siler City Snow Camp Road	55.40	*	*	9272	*	*
Approximately 1,740 feet upstream of Siler City Snow Camp Road	54.40	*	*	9161	*	*
Approximately 530 feet downstream of a dam	47.30	*	*	9052	*	*
Approximately 1,000 feet upstream of Ed Clapp Road	37.80	*	*	8297	*	*
At the confluence of Mud Lick Creek	27.70	*	*	7211	*	*
At the confluence of Greenbriar Creek	14.80	*	*	5940	*	*
At the confluence of North Prong Rocky River	14.60	*	*	4010	*	*
Approximately 50 feet downstream of Piney Grove Church Road	12.60	*	*	3974	*	*
Approximately 740 feet upstream of Piney Grove Church Road	11.60	*	*	3635	*	*
Approximately 1.6 miles upstream of Piney Grove Church Road	11.20	*	*	3455	*	*
Approximately 2.7 miles upstream of Piney Grove Church Road	8.80	*	*	3374	*	*
Approximately 2.9 miles upstream of Piney Grove Church Road	7.40	*	*	2891	*	*
Approximately 260 feet downstream of Staley Snow Camp Road	6.90	*	*	2612	*	*
<b>Rocky River Tributary 1</b>						
Immediately upstream of confluence with Rocky River	2.29	909	1500	1690	*	2260
Immediately downstream of US Highway 421	2.11	854	1420	1600	*	2150
Immediately downstream of Loves Creek Church Road	2.03	810	1360	1540	*	2070
Approximately 1,100 feet upstream of Loves Creek Church Road	1.96	778	1310	1490	*	2010

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 2,200 feet upstream of Loves Creek Church Road	1.58	664	1140	1290	*	1750
Approximately 0.5 mile downstream of 15th Street	1.36	590	1020	1170	*	1590
Approximately 200 feet downstream of 15th Street	0.88	321	615	720	*	1010
Immediately downstream of Siler City Snow Camp Road	0.75	333	556	654	*	906
Approximately 0.7 mile upstream of Siler City Snow Camp Road	0.30	*	*	380	*	*
<b>Sandy Branch</b>						
At the confluence with Bear Creek	4.30	*	*	1866	*	*
Approximately 0.5 mile downstream of NC 902	4.00	*	*	1774	*	*
<b>Shaddox Creek</b>						
At the confluence with Haw River	16.10	*	*	4223	*	*
Approximately 370 feet upstream of Railroad	15.00	*	*	4048	*	*
Approximately 1,480 feet upstream of Corinth Road	14.60	*	*	3987	*	*
Approximately 0.8 mile upstream of Corinth Road	13.90	*	*	3858	*	*
Approximately 0.5 mile downstream of Old US 1 Highway	7.60	*	*	2650	*	*
Approximately 110 feet upstream of Old US 1 Highway	7.40	*	*	2607	*	*
Approximately 0.7 mile downstream of US 1	6.50	*	*	2396	*	*
Approximately 1,740 feet downstream of US 1	3.70	*	*	1694	*	*
Approximately 1.1 miles upstream of US 1	2.90	*	*	1441	*	*
Approximately 2.3 miles upstream of US 1	2.40	*	*	1293	*	*
Immediately downstream of New Elam Church Road (SR 1910)	2.28	666	1090	1270	*	1730
Approximately 1,000 feet upstream of New Elam Church Road (SR 1910)	1.89	590	968	1130	*	1550
Approximately 0.5 mile upstream of New Elam Church Road (SR 1910)	1.51	513	846	992	*	1360
Approximately 0.7 mile upstream of New Elam Church Road (SR 1910)	0.62	371	664	758	*	1040
<b>South Fork</b>						
Approximately 250 feet upstream of Bethel South Fork Road (SR 2351)	8.00	*	*	3140	*	*
Approximately 1.2 miles upstream of South Fork Bethel Road	5.90	*	*	2590	*	*
Approximately 370 feet upstream of Moon Lindley Road	4.20	*	*	2110	*	*
Approximately 0.5 mile upstream of Moon Lindley Road	4.10	*	*	2070	*	*
<b>Stinking Creek</b>						
Approximately 480 feet downstream of Gum Springs Church Road	6.90	*	*	2497	*	*
Approximately 0.4 mile downstream of Talon Drive	1.20	*	*	832	*	*
Approximately 850 feet downstream of Talon Drive	1.20	*	*	819	*	*
<b>Terrells Creek</b>						
At the confluence with Haw River	15.90	*	*	4204	*	*
At the confluence of Crows Creek	13.10	*	*	3722	*	*
Approximately 0.7 mile upstream of the confluence of Crows Creek	12.70	*	*	3654	*	*
Approximately 1,950 feet downstream of the confluence of Meadow Branch	11.80	*	*	3484	*	*
At the confluence of Meadow Branch	7.50	*	*	2615	*	*
Approximately 0.7 mile upstream of Crawford Dairy Road crossing	6.50	*	*	2405	*	*
<b>Terrells Creek (West)</b>						
At the confluence with Haw River	29.10	*	*	6130	*	*
Approximately 1,110 feet upstream of the confluence with Haw River	28.90	*	*	6100	*	*
At the confluence of Lick Creek	21.00	*	*	4997	*	*

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 0.6 mile upstream of NC 87	20.70	*	*	4954	*	*
Approximately 1.1 miles upstream of NC 87	19.70	*	*	4804	*	*
Approximately 1.4 miles downstream of Castle Rock Farm Road	15.50	*	*	4125	*	*
Approximately 0.6 mile downstream of Castle Rock Farm Road	15.00	*	*	4049	*	*
Approximately 0.5 mile upstream of Castle Rock Farm Road	14.20	*	*	3914	*	*
Approximately 0.8 mile upstream of Castle Rock Farm Road	12.60	*	*	3625	*	*
Approximately 1.1 miles upstream of Castle Rock Farm Road	11.60	*	*	3442	*	*
Approximately 0.6 mile upstream of White Smith Road	6.70	*	*	2452	*	*
Approximately 1,160 feet downstream of Woody Store Road	6.60	*	*	2418	*	*
Approximately 1,640 feet downstream of the Chatham/Orange County boundary	5.60	*	*	2193	*	*
Approximately 0.8 mile upstream of Woody Store Road	3.10	*	*	1499	*	*
Approximately 1.0 mile upstream of Woody Store Road	2.90	*	*	1448	*	*
Approximately 1.5 miles upstream of Woody Store Road	2.70	*	*	1394	*	*
<b>Tick Creek</b>						
At the confluence with Rocky River	21.00	*	*	5850	*	*
Approximately 1.1 miles upstream of the confluence with Rocky River	20.40	*	*	5840	*	*
Approximately 160 feet upstream of Rives Chapel Church Road	19.50	*	*	5810	*	*
Approximately 320 feet upstream of Rives Chapel Church Road	18.70	*	*	5780	*	*
Approximately 0.5 mile downstream of Ike Brooks Road	17.80	*	*	5730	*	*
Approximately 850 feet downstream of Ike Brooks Road	17.00	*	*	5680	*	*
Approximately 1,580 feet downstream of US 421	16.00	*	*	5600	*	*
At the confluence of Welch Creek	13.10	*	*	4620	*	*
At the confluence of Tick Creek Tributary	9.80	*	*	3520	*	*
Approximately 1.5 miles downstream of Petty Road	8.90	*	*	3240	*	*
Approximately 0.6 mile downstream of Petty Road	3.80	*	*	1720	*	*
Approximately 1,580 feet upstream of Petty Road	3.00	*	*	1482	*	*
Approximately 160 feet upstream of Siler City Glendon Road	1.80	*	*	1078	*	*
<b>Tick Creek Tributary</b>						
Approximately 0.4 mile downstream of Mount Vernon Springs Road	3.90	*	*	1743	*	*
At the confluence with Tick Creek	3.00	*	*	1490	*	*
<b>Tick Creek Tributary 1</b>						
Approximately 410 feet upstream of confluence with Tick Creek	4.10	*	*	1807	*	*
Approximately 630 feet upstream of Mount Vernon Springs Road	3.30	*	*	1574	*	*
Approximately 1,690 feet upstream of Mount Vernon Springs Road	2.80	*	*	1417	*	*
<b>Tributary A</b>						
At the confluence with Indian Creek (into Deep River)	1.10	*	*	793	*	*
<b>Turkey Creek</b>						
At the confluence with Robeson Creek	4.50	*	*	1909	*	*
Approximately 690 feet upstream of Moncure Pittsboro Road	3.90	*	*	1732	*	*
Approximately 0.7 mile upstream of Sanford Road	1.50	*	*	959	*	*
Approximately 1.1 miles upstream of Sanford Road	1.30	*	*	857	*	*
Approximately 2.2 miles upstream of Sanford Road	0.30	*	*	348	*	*
<b>Tyson's Creek</b>						

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 230 feet upstream of the Chatham/Moore County boundary	7.50	*	*	3100	*	*
Approximately 290 feet downstream of NC 42	4.40	*	*	2630	*	*
Approximately 1,340 feet upstream of NC 42	4.30	*	*	1890	*	*
Approximately 0.9 mile downstream of Mert McManness Road	3.30	*	*	1860	*	*
Approximately 1,500 feet upstream of confluence with Tysons Creek	2.50	*	*	1320	*	*
<b>Tysons Creek Tributary</b>						
The confluence with Tysons Creek	2.60	*	*	1350	*	*
Approximately 400 feet upstream of NC Highway 42	2.40	*	*	1290	*	*
Approximately 1,600 feet upstream of NC Highway 42	2.30	*	*	1260	*	*
Approximately 0.5 mile upstream of NC Highway 42	2.20	*	*	1230	*	*
Approximately 0.7 mile upstream of NC Highway 42	1.00	*	*	731	*	*
<b>Varnell Creek</b>						
At the confluence with Rocky River	10.10	*	*	3158	*	*
Approximately 740 feet upstream of Stage Coach Road	9.70	*	*	3073	*	*
Approximately 0.6 mile upstream of US 64	8.80	*	*	2900	*	*
Approximately 0.6 mile upstream of US 64	7.80	*	*	2689	*	*
Approximately 1.2 miles upstream of US 64	7.50	*	*	2631	*	*
Approximately 1.9 miles upstream of US 64	6.60	*	*	2418	*	*
<b>Weaver Creek</b>						
At the confluence with B. Everett Jordan Lake	1.20	*	*	851	*	*
Approximately 1,530 feet upstream of the confluence of Weaver Creek Tributary	1.00	*	*	750	*	*
Approximately 1.3 miles upstream of the confluence of Weaver Creek Tributary	0.40	*	*	431	*	*
<b>Weaver Creek Tributary</b>						
At the confluence with B. Everett Jordan Lake	1.00	*	*	742	*	*
Approximately 1.0 mile upstream of the confluence with B. Everett Jordan Lake	0.50	*	*	496	*	*
<b>Welch Creek</b>						
At the confluence with Tick Creek	1.80	*	*	1077	*	*
<b>West Price Creek</b>						
The Chatham/Orange County boundary	0.90	*	*	903	*	*
Approximately 450 feet upstream of Chatham/Orange County boundary	0.80	*	*	671	*	*
Approximately 1,430 feet upstream of Chatham/Orange County boundary	0.70	*	*	570	*	*
<b>White Oak Creek Tributary 1</b>						
At the confluence with White Oak Creek/B. Everett Jordan Lake	0.30	*	*	351	*	*
<b>Wilkinson Creek</b>						
Approximately 0.6 mile downstream of Manns Chapel Road	5.06	1080	1750	2030	*	2760
Approximately 2,200 feet downstream of Manns Chapel Road	3.63	882	1430	1670	*	2270
Immediately downstream of Manns Chapel Road	3.42	850	1380	1610	*	2190
Approximately 1,900 feet upstream of Manns Chapel Road	3.11	802	1310	1520	*	2080
Immediately downstream of Tobacco Road	2.63	723	1180	1380	*	1880
Approximately 2,000 feet downstream of Lamont Norwood Road	2.31	667	1090	1280	*	1750
Approximately 800 feet downstream of Lamont Norwood Road	1.86	584	959	1120	*	1540

**Table 13 - Summary of Discharges**

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Immediately downstream of Lamont Norwood Road	1.55	522	859	1010	*	1380
<b>Windfall Branch</b>						
At the confluence with B. Everett Jordan Lake	1.10	*	*	782	*	*
Approximately 690 feet upstream of the confluence with B. Everett Jordan Lake	1.00	*	*	760	*	*

The stillwater elevations have been determined for the 1% [add 10%, 2%, and 0.2% here if that data is available] annual chance flood for the flooding sources studied by detailed methods and are summarized in Table 14, "Summary of Stillwater Elevations."

**Table 14 - Summary of Non-Coastal Stillwater Elevations**

Flooding Source	FIRM Panel Number(s)	Elevations (feet NAVD)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
B. Everett Jordan Lake	3720070400	*	*	238	*
Harris Reservoir	3720060600	*	*	252	*

Table 15, "Gage Information", lists the stream gages located in Chatham County, including the drainage area of the flooding source at the gage and the period of record available at the time of the publication of this FIS Report.

**Table 15 - Gage Information**

Gage Number	Flooding Source	Site Name	Drainage Area (square miles)	Period of Record	
				From	To
02097000	B. Everett Jordan Lake	HAW RIVER NEAR PITTSBORO, NC	1310.00	1928	1973
02101890	Bear Creek	BEAR CREEK NEAR GOLDSTON, NC	43.20	1952	1971
02102000	Deep River	DEEP RIVER AT MONCURE, NC	1430.00	1931	2003
02096960	Haw River	Haw River near Bynum, NC	1275.00	1974	2011
02098198	Haw River	HAW R BELOW B. EVERETT JORDAN DAM NR MONCURE NC	1690.00	1980	1992
02097010	Robeson Creek Tributary 4	ROBESON CREEK NEAR PITTSBORO, NC	1.13	1954	1976
0210166029	Rocky River	ROCKY R AT SR1300 NR CRUTCHFIELD CROSSROADS, NC	7.42	1989	2010
02101800	Tick Creek	TICK CREEK NEAR MOUNT VERNON SPRINGS, NC	15.50	1959	2003

## 5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the flood elevations for the selected recurrence intervals. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and/or Water-surface elevation rasters. For stream segments for which BFEs were computed, selected cross-section locations are also shown on the FIRM. Flood Profiles and/or Water-surface elevation rasters were developed showing computed water-surface elevations for floods of the selected recurrence intervals.

Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles and/or Water-surface elevation rasters or in the Floodway Data tables in the FIS Report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS in conjunction with the data shown on the FIRM.

The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the Flood Profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For details on the county's hydraulic analyses, the hydraulic report is available by request.

For the streams studied by detailed methods, water surface elevations of floods of the selected recurrence intervals were computed

through use of the Army Corps of Engineers' HEC RAS step backwater computer program . The hydraulic analyses were based on unobstructed flow. The flood elevations shown on the Profiles and/or Water-surface elevation rasters are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail. The computer models were calibrated using historic high water data collected during field investigations.

The cross section geometries were obtained from a combination of digital elevation data obtained by Light Detection and Ranging (LIDAR) and field surveys. All bridges, dams, and culverts were field surveyed to obtain elevation data and structural geometry. Natural floodplain cross sections were surveyed approximately every 4000 feet along the detail study reaches to obtain the channel geometry between bridges and culverts. Overbank cross section data for the backwater analyses were obtained from recently flown LIDAR data.

Channel roughness factors (Manning's "n") used in the hydraulic computations were made in the field by an engineer where stream access was possible, with orthophotos used to supplement areas that could not be accessed. The channel and overbank "n" values for all of the streams studied by detailed methods are shown in Table 16, "Roughness Coefficients".

**Table 16 - Roughness Coefficients**

Stream	Channel "n"	Overbank "n"
Bear Creek	0.040 to 0.050	0.100 to 0.150
Bear Creek (into Indian Creek)	0.050 to 0.060	0.150
Bear Creek Tributary 1	0.050	0.050 to 0.140
Beaver Creek Tributary 1	0.040 to 0.050	0.120 to 0.150
Beaver Creek Tributary 2	0.040 to 0.050	0.140 to 0.150
Beaver Creek Tributary 3	0.040 to 0.050	0.100 to 0.150
Blood Run Creek	0.045 to 0.050	0.110 to 0.150
Brooks Creek	0.045 to 0.050	0.050 to 0.150
Brooks Creek Tributary	0.050 to 0.060	0.050 to 0.140
Brush Creek	0.050	0.100 to 0.150
Buckhorn Creek	0.048	0.145
Buckhorn Creek Tributary 1	0.050	0.150 to 0.162
Buckhorn Creek Tributary 2	0.050	0.145
Buckhorn Creek Tributary 3	0.040	0.140 to 0.684
Buckhorn Creek Tributary 4	0.035 to 0.045	0.145
Bush Creek	0.040 to 0.050	0.100 to 0.150
Cane Creek (South) Tributary 1	0.045 to 0.050	0.100 to 0.150
Cape Fear River	0.030 to 0.059	0.050 to 0.666
Cedar Creek	0.045 to 0.050	0.130 to 0.150
Cedar Creek Tributary 1	0.045	0.130 to 0.150
Cedar Creek Tributary 2	0.045 to 0.050	0.130 to 0.150
Collins Creek	0.040 to 0.050	0.100 to 0.150
Crooked Creek	0.030 to 0.050	0.080 to 0.200
Crows Creek	0.045	0.150
Cub Creek	0.040 to 0.550	0.120 to 0.150
Deep River	0.020 to 0.070	0.040 to 0.200
Deep River Tributary 5	0.051	0.110 to 0.150
Deep River Tributary 6	0.049	0.140 to 0.830
Deep River Tributary 7	0.051	0.140 to 0.150
Deep River Tributary 8	0.035 to 0.053	0.130 to 0.150
Dry Creek	0.040 to 0.055	0.050 to 0.140
East Price Creek	0.034 to 0.060	0.050 to 0.150
Folkner Branch	0.040 to 0.050	0.100 to 0.150
Georges Creek	0.050	0.100 to 0.150
Georges Creek Tributary 1	0.050	0.110 to 0.150
Georges Creek Tributary 2	0.050	0.110 to 0.150
Greenbriar Creek	0.050 to 0.055	0.080 to 0.200
Gulf Creek	0.040 to 0.050	0.110 to 0.150
Harlands Creek	0.045 to 0.050	0.120 to 0.150
Harts Creek	0.050	0.100 to 0.150
Haw River	0.030 to 0.140	0.045 to 0.200
Herndon Creek	0.040 to 0.055	0.110 to 0.130
Hill Creek	0.045 to 0.050	0.100 to 0.150
Indian Creek (into Deep River)	0.050 to 0.059	0.050 to 0.310

**Table 16 - Roughness Coefficients**

Stream	Channel "n"	Overbank "n"
Kit Creek	0.030 to 0.070	0.070 to 0.130
Lacy Creek	0.050	0.110 to 0.150
Landrum Creek	0.050	0.100 to 0.150
Landrum Creek Tributary	0.050	0.110 to 0.140
Lick Creek	0.040 to 0.050	0.110 to 0.150
Line Creek	0.020 to 0.055	0.020 to 0.100
Little Brush Creek	0.040 to 0.050	0.110 to 0.150
Little Indian Creek	0.047 to 0.058	0.080 to 0.200
Long Branch	0.040 to 0.050	0.100 to 0.150
Loves Creek	0.045 to 0.050	0.120 to 0.150
Loves Creek Tributary 1	0.045 to 0.060	0.050 to 0.150
Loves Creek Tributary 2	0.040 to 0.050	0.100 to 0.140
Loves Creek Tributary 3	0.040 to 0.050	0.120 to 0.140
Meadow Branch	0.050	0.140
Meadow Creek	0.050	0.110 to 0.150
Mill Branch	0.050	0.140
Morgan Creek	0.037 to 0.061	0.045 to 0.910
Morris Branch	0.030 to 0.050	0.100 to 0.200
Mud Lick Creek	0.050	0.100 to 0.150
Nancy Branch	0.045 to 0.050	0.035 to 0.150
New Hope Creek	0.035 to 0.060	0.040 to 0.180
New Hope River Tributary 1	0.045 to 0.050	0.150
North Prong Rocky River	0.050	0.100 to 0.150
Northeast Creek	0.040 to 0.061	0.066 to 0.200
Overcup Creek	0.045 to 0.050	0.150
Overcup Creek Tributary	0.045 to 0.050	0.150
Panther Creek	0.030 to 0.070	0.070 to 0.130
Parkers Creek	0.045 to 0.050	0.150
Persimmons Nursery Branch	0.050	0.110 to 0.140
Pokeberry Creek	0.040 to 0.070	0.030 to 0.350
Reedy Fork	0.045 to 0.050	0.110 to 0.150
Robeson Creek	0.040 to 0.050	0.128 to 0.150
Robeson Creek Tributary 1	0.045 to 0.050	0.100 to 0.150
Robeson Creek Tributary 2	0.036 to 0.050	0.080 to 0.110
Robeson Creek Tributary 3	0.045 to 0.055	0.050 to 0.150
Robeson Creek Tributary 3A	0.050 to 0.120	0.050 to 0.150
Robeson Creek Tributary 4	0.045 to 0.050	0.110 to 0.150
Robeson Creek Tributary 5	0.045 to 0.050	0.110 to 0.150
Rocky Branch (into Deep River)	0.055	0.145 to 0.150
Rocky Branch (into Georges Creek)	0.050 to 0.060	0.100 to 0.150
Rocky Ford Branch	0.045 to 0.050	0.150
Rocky River	0.045 to 0.060	0.050 to 0.150
Rocky River Tributary 1	0.040 to 0.055	0.080 to 0.150
Sandy Branch	0.050	0.100 to 0.140
Shaddox Creek	0.040 to 0.050	0.050 to 0.150
South Fork	0.045 to 0.050	0.110 to 0.269
Southwest Creek	0.030 to 0.050	0.080 to 0.200
Stinking Creek	0.040 to 0.050	0.140 to 0.150
Terrells Creek	0.040 to 0.050	0.100 to 0.150
Terrells Creek (West)	0.040 to 0.050	0.100 to 0.150
Tick Creek	0.050	0.100 to 0.150
Tick Creek Tributary	0.045 to 0.050	0.120 to 0.150
Tick Creek Tributary 1	0.049	0.060 to 0.130
Turkey Creek	0.040 to 0.050	0.110 to 0.150
Tysons Creek	0.035 to 0.055	0.050 to 0.090
Tysons Creek Tributary	0.055	0.060 to 0.090
Varnell Creek	0.050 to 0.055	0.100 to 0.150
Weaver Creek	0.045 to 0.050	0.150
Weaver Creek Tributary	0.045 to 0.050	0.150
Welch Creek	0.050	0.110 to 0.150
West Price Creek	0.046 to 0.060	0.060 to 0.140



**Table 16 - Roughness Coefficients**

Stream	Channel "n"	Overbank "n"
White Oak Creek Tributary 1	0.045 to 0.050	0.110 to 0.150
Wilkinson Creek	0.040 to 0.060	0.050 to 0.200
Windfall Branch	0.045 to 0.050	0.150

For flooding sources studied by limited detailed methods in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this report and the FIRM panels. This method entails developing a HEC-RAS hydraulic model, resulting in the calculation of BFEs and the delineation of the 1% annual chance floodplain (designated as Zone AE). Cross sections for the flooding sources studied by limited detailed methods were obtained using digital elevation data obtained with LIDAR technology developed as part of the North Carolina Statewide Floodplain Mapping Program. The hydraulic model is prepared using this digital elevation data, without surveying bathymetric or structural data. Where bridge or culvert data are readily available, such as from the North Carolina Department of Transportation, these data have been reflected in the hydraulic model. If these structural data are not readily available, field measurements of these structures were made to approximate their geometry in the hydraulic models. In addition, this method does not include field surveys that determine specifics on channel and floodplain characteristics. A limited detailed study is a "buildable" product that can be upgraded to a fully detailed study at a later date by verifying stream channel characteristics, bridge and culvert opening geometry, and by analyzing multiple recurrence intervals.

The results of the HEC-RAS computations are tabulated for all cross sections (Table 17, "Limited Detailed Flood Hazard Data"). Flood Profiles have not been developed for streams studied by limited detailed methods. Water-surface elevation rasters were developed for streams studied by limited detailed methods. In addition, floodways for streams studied by limited detailed methods are not delineated on the FIRM. However, the 1% annual chance water-surface elevations, flood discharges, and non-encroachment widths from the limited detailed studies for every modeled cross section are given in Table 17. The non-encroachment widths given at modeled cross sections can be used by communities to enforce floodplain management ordinances that meet the requirement defined in 44 CFR 60.3(c)(10).

Between cross sections for streams studied by limited detailed methods, 1% annual chance water-surface elevations can be calculated by mathematical interpolation using the distance along the stream centerline. Non-encroachment widths and, therefore, the location of a non-encroachment area boundary between cross sections should be determined based on either 1) mathematical interpolation, or 2) the non-encroachment width at the upstream or downstream cross section, whichever is larger. If the width determined by this second method is wider than the Special Flood Hazard Area (SFHA) or the 1% annual chance floodplain delineated on the FIRM for this location along the stream, the non-encroachment area shall be considered to be coincident with the SFHA. A full detailed study incorporating field survey data in the HEC-RAS hydraulic model may be submitted for a Letter of Map Revision (LOMR) request to map a regulatory floodway along a section of a stream in lieu of applying the non-encroachment widths listed in Table 17.

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
<b>Bear Creek</b>				
003	308	8,775	292.4 <sup>1</sup>	66 / 40
009	851	8,775	292.4 <sup>1</sup>	55 / 31
015	1,535	8,775	292.4 <sup>1</sup>	52 / 88
020	2,000	8,775	292.7	89 / 77
025	2,522	8,775	293.5	31 / 53
028	2,814	8,775	294.5	40 / 40
028	2,846	8,775	295.0	40 / 40
030	3,009	8,775	295.4	40 / 40
034	3,429	8,775	296.9	40 / 41
040	3,966	8,775	298.2	40 / 51
045	4,451	8,747	299.5	34 / 71
050	4,963	8,747	300.4	36 / 50

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
056	5,562	8,747	301.8	35 / 33
060	5,952	8,747	302.9	33 / 48
064	6,402	8,747	304.4	34 / 37
069	6,944	8,747	308.2	34 / 41
075	7,478	8,747	310.3	39 / 61
081	8,097	8,747	311.6	38 / 52
084	8,450	8,747	312.8	36 / 38
090	8,952	8,747	315.1	45 / 50
095	9,458	8,747	319.5	38 / 50
100	10,031	8,747	321.2	34 / 90
105	10,456	8,747	322.1	50 / 95
115	11,494	8,747	325.5	123 / 138
121	12,112	8,747	326.5	64 / 105
125	12,500	8,747	327.2	73 / 147
128	12,849	8,747	327.6	225 / 82
133	13,294	8,747	327.9	87 / 85
133	13,345	8,747	328.4	87 / 85
136	13,571	8,640	328.6	42 / 77
139	13,874	8,640	329.0	64 / 45
145	14,500	8,640	329.8	41 / 36
150	14,957	8,640	331.5	61 / 62
155	15,479	8,640	332.5	101 / 52
159	15,945	8,640	333.1	88 / 32
164	16,424	8,640	333.6	45 / 61
171	17,120	8,534	334.5	37 / 82
175	17,472	8,534	334.9	38 / 84
180	17,974	8,534	335.3	38 / 51
184	18,449	8,534	336.1	104 / 31
191	19,104	8,534	337.1	39 / 44
195	19,467	8,534	338.8	40 / 103
200	20,004	8,534	339.9	50 / 105
205	20,514	8,534	340.7	55 / 183
208	20,773	8,534	340.9	57 / 95
218	21,781	8,534	342.2	35 / 45
227	22,702	8,432	344.0	65 / 38
235	23,454	8,432	345.3	231 / 45
238	23,838	8,432	345.5	95 / 34
244	24,414	8,432	346.3	188 / 45
250	24,950	8,432	346.8	144 / 131
255	25,462	8,432	347.2	165 / 164
260	26,000	8,432	347.5	172 / 105
263	26,302	8,432	347.7	206 / 55
268	26,785	8,432	348.0	51 / 63
268	26,837	8,432	348.8	51 / 63
273	27,285	8,432	349.3	60 / 135

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
278	27,829	8,432	349.7	268 / 55
287	28,707	8,432	350.2	90 / 71
291	29,097	8,324	350.7	133 / 187
295	29,477	8,324	350.8	46 / 78
300	30,000	8,324	351.2	52 / 196
305	30,548	8,324	351.5	54 / 189
315	31,500	8,324	352.6	149 / 44
319	31,899	8,324	353.4	37 / 90
327	32,672	8,324	354.8	140 / 38
331	33,099	8,324	355.3	57 / 44
335	33,500	8,324	355.8	136 / 49
340	34,000	8,324	356.7	40 / 167
345	34,500	7,887	357.5	47 / 107
352	35,162	7,887	358.5	36 / 155
358	35,839	7,887	359.3	164 / 38
363	36,304	7,887	359.7	108 / 42
369	36,929	7,836	360.4	96 / 95
375	37,538	7,836	360.9	66 / 130
380	38,000	7,836	361.2	49 / 90
385	38,506	7,836	361.7	196 / 47
392	39,213	7,836	362.0	67 / 44
396	39,595	7,836	362.4	44 / 60
400	40,000	7,836	362.8	41 / 75
405	40,531	7,836	363.2	43 / 56
411	41,101	7,836	363.7	121 / 35
415	41,463	7,836	363.9	102 / 61
415	41,515	7,836	364.0	102 / 61
418	41,823	7,836	364.4	124 / 31
426	42,627	7,734	364.8	40 / 136
431	43,142	7,734	365.1	114 / 50
435	43,500	7,734	365.3	130 / 40
441	44,053	7,734	365.8	127 / 42
445	44,500	7,734	366.0	55 / 60
450	45,000	7,624	366.4	54 / 65
456	45,571	7,624	366.8	50 / 83
460	45,962	7,624	367.0	47 / 65
464	46,442	7,624	367.6	210 / 37
470	47,000	7,624	367.9	130 / 69
475	47,500	7,624	368.4	160 / 168
477	47,741	7,624	368.5	173 / 196
485	48,482	7,509	368.8	58 / 139
491	49,144	7,509	369.3	51 / 37
494	49,414	7,509	369.8	130 / 40
498	49,836	7,509	369.9	65 / 45
504	50,409	7,509	370.8	42 / 101

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
509	50,922	7,449	371.7	84 / 68
514	51,441	7,449	372.5	86 / 60
520	52,000	7,449	373.7	92 / 40
524	52,374	7,449	374.7	70 / 72
524	52,414	7,449	375.2	70 / 72
530	53,000	7,449	376.2	69 / 32
535	53,533	7,449	377.2	44 / 40
540	53,956	7,449	378.2	46 / 63
544	54,351	7,449	379.2	78 / 35
559	55,900	7,335	381.8	54 / 150
566	56,590	7,335	382.8	136 / 44
572	57,170	7,335	383.3	42 / 186
575	57,500	7,335	383.6	64 / 88
579	57,882	7,238	384.1	156 / 46
585	58,481	6,581	384.7	70 / 114
589	58,895	6,578	384.9	89 / 58
595	59,518	6,578	385.5	275 / 41
602	60,199	6,578	385.9	55 / 61
606	60,571	6,578	386.4	57 / 50
610	61,018	6,578	387.1	61 / 45
611	61,084	6,578	388.0	61 / 45
616	61,593	6,578	388.3	60 / 65
620	61,965	6,578	388.9	61 / 75
624	62,441	6,578	389.5	43 / 43
625	62,489	6,578	390.2	43 / 43
629	62,920	6,578	391.1	88 / 35
635	63,509	6,451	392.2	42 / 119
638	63,777	6,451	392.5	42 / 117
642	64,207	6,451	392.9	60 / 78
651	65,077	6,451	394.0	151 / 49
656	65,646	6,451	394.9	45 / 243
665	66,483	6,451	396.0	236 / 55
670	67,000	6,451	396.6	197 / 56
675	67,500	6,451	397.2	73 / 68
681	68,127	6,451	398.3	34 / 88
685	68,500	6,451	398.8	157 / 43
689	68,917	6,451	399.5	92 / 58
696	69,574	6,345	400.7	43 / 79
701	70,068	6,345	402.0	208 / 44
706	70,607	6,345	402.8	234 / 38
711	71,081	6,345	403.8	32 / 145
715	71,474	6,345	404.7	188 / 39
720	71,959	6,345	405.7	267 / 29
725	72,500	6,345	406.2	64 / 45
729	72,916	6,345	407.3	195 / 43

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
735	73,500	6,345	407.9	148 / 56
739	73,949	6,345	408.5	69 / 114
747	74,735	6,345	409.4	166 / 40
752	75,166	5,637	409.7	51 / 80
752	75,218	5,637	410.0	51 / 80
756	75,630	5,637	410.7	61 / 177
757	75,660	5,637	411.8	61 / 177
761	76,123	5,636	412.1	42 / 267
769	76,910	5,636	412.4	265 / 95
774	77,447	5,636	412.5	94 / 54
781	78,106	5,636	413.3	101 / 90
786	78,636	5,636	414.0	34 / 198
794	79,356	5,580	414.7	94 / 80
800	80,000	5,243	415.5	145 / 25
804	80,438	5,243	416.2	77 / 98
810	81,000	5,243	416.6	39 / 136
814	81,432	5,243	417.1	92 / 42
822	82,151	5,243	418.0	23 / 153
830	82,957	5,213	419.0	126 / 31
836	83,649	5,213	419.7	38 / 253
843	84,265	5,213	420.2	101 / 157
846	84,555	5,213	420.5	143 / 40
850	85,000	5,213	421.0	145 / 40
856	85,624	5,213	421.7	44 / 102
862	86,209	5,213	422.4	108 / 31
867	86,696	5,213	423.0	72 / 113
869	86,942	5,213	423.3	105 / 96
870	86,988	5,213	423.7	105 / 96
875	87,500	5,213	424.1	240 / 63
881	88,062	5,069	424.5	27 / 203
886	88,647	4,012	425.0	131 / 52
891	89,136	4,012	425.4	405 / 43
902	90,202	4,012	425.8	302 / 55
907	90,674	4,012	426.1	408 / 46
916	91,587	4,012	426.6	41 / 406
925	92,500	4,012	427.6	87 / 86
930	93,000	4,012	428.5	138 / 30
937	93,672	4,012	429.6	102 / 205
944	94,394	4,012	430.2	232 / 61
951	95,091	4,012	430.7	68 / 68
955	95,500	4,012	431.5	45 / 73
961	96,110	4,012	432.6	245 / 22
965	96,500	4,012	433.1	158 / 47
971	97,069	3,898	433.7	39 / 78
975	97,537	3,500	434.3	37 / 51

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
979	97,904	3,500	434.8	37 / 36
980	97,961	3,500	435.5	37 / 36
984	98,409	3,500	436.2	100 / 32
990	98,997	3,500	437.8	22 / 114
995	99,500	3,500	439.8	82 / 25
1001	100,117	3,500	441.4	98 / 46
1005	100,465	3,500	442.0	41 / 84
1010	101,000	3,321	443.0	101 / 44
1015	101,500	3,321	443.7	35 / 90
1020	102,000	3,321	444.6	76 / 79
1024	102,352	3,321	445.2	46 / 67
1030	103,000	3,321	447.1	53 / 50
1036	103,551	3,321	449.2	27 / 131
1039	103,923	3,321	449.8	42 / 58
1042	104,203	3,321	451.1	65 / 50
1042	104,247	3,321	451.9	65 / 50
1045	104,500	3,321	452.6	66 / 56
1050	105,000	3,321	453.5	48 / 124
1058	105,752	3,321	454.3	84 / 130
1060	106,000	3,321	454.5	126 / 76
1065	106,500	3,321	455.1	149 / 62
1070	106,952	3,321	455.7	182 / 73
1075	107,500	3,321	456.3	156 / 54
1079	107,948	2,660	456.9	100 / 14
1085	108,501	2,660	458.4	73 / 56
1090	108,996	2,660	459.0	52 / 51
1093	109,299	2,660	459.8	65 / 135
1093	109,336	2,660	459.9	65 / 135
1095	109,497	2,660	460.1	21 / 260
1099	109,949	2,604	460.4	109 / 59
1105	110,496	2,604	460.7	169 / 140
1110	111,007	2,604	461.0	204 / 11
1115	111,499	2,604	461.8	41 / 73
1120	111,993	2,604	462.8	91 / 120
1125	112,499	2,604	463.6	112 / 32
1130	113,006	2,325	464.5	34 / 63
1135	113,494	2,325	465.8	35 / 93
1140	114,003	2,325	466.8	94 / 40
1141	114,075	2,325	467.1	94 / 40
1145	114,500	2,325	467.6	43 / 102
1150	115,048	2,325	468.7	195 / 30
1155	115,540	2,325	469.2	163 / 44
1161	116,052	2,325	469.9	49 / 213
1166	116,553	2,325	470.5	78 / 88
1169	116,916	2,325	471.5	92 / 93

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1175	117,505	2,116	472.2	281 / 9
1180	118,004	2,116	472.6	199 / 91
1186	118,580	2,116	473.4	47 / 133
1190	118,955	2,116	474.5	22 / 241
1195	119,474	2,116	474.8	174 / 174
1200	120,007	2,116	475.0	70 / 134
1205	120,501	2,116	475.8	91 / 61
1208	120,818	1,798	476.3	48 / 122
1208	120,848	1,798	476.4	48 / 122
1211	121,106	1,798	476.8	8 / 90
1215	121,532	1,798	477.7	72 / 111
1216	121,562	1,798	477.8	72 / 111
1220	121,971	1,798	479.0	108 / 130
<b>Bear Creek (into Indian Creek)</b>				
001	65	2,008	243.9 <sup>1</sup>	40 / 55
011	1,057	2,008	248.1	74 / 17
016	1,579	2,008	252.9	26 / 24
022	2,249	2,008	262.8	24 / 17
027	2,742	2,008	268.8	17 / 42
032	3,169	2,008	273.4	17 / 17
036	3,558	2,008	278.1	47 / 19
040	4,001	2,008	280.7	17 / 17
045	4,484	2,008	286.9	34 / 36
051	5,113	2,008	291.0	29 / 29
054	5,435	2,008	294.9	38 / 17
060	6,011	2,008	299.7	64 / 17
064	6,443	2,008	302.4	39 / 30
069	6,935	2,008	305.2	125 / 17
075	7,496	2,008	308.4	18 / 56
082	8,225	2,008	312.5	79 / 23
086	8,647	2,008	315.0	17 / 29
091	9,077	2,008	318.7	17 / 39
095	9,533	2,008	320.9	40 / 27
101	10,084	2,008	322.9	69 / 20
105	10,529	2,008	324.8	17 / 59
114	11,361	1,718	328.9	37 / 37
118	11,789	1,718	330.7	43 / 39
122	12,177	1,718	332.1	38 / 67
125	12,548	1,718	333.6	73 / 59
132	13,215	1,718	335.8	203 / 15
139	13,943	1,718	339.3	35 / 21
142	14,241	1,718	342.6	66 / 16
149	14,890	1,718	347.4	43 / 25
154	15,403	1,718	352.0	25 / 64
158	15,828	1,718	354.1	37 / 50

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
162	16,218	1,718	356.2	51 / 29
166	16,610	1,718	358.5	26 / 51
171	17,107	1,718	360.7	55 / 79
176	17,649	1,435	362.8	57 / 58
181	18,147	1,435	365.7	26 / 43
189	18,894	1,435	369.8	47 / 111
194	19,376	1,435	371.6	96 / 29
197	19,690	1,435	373.4	53 / 31
200	19,966	1,435	375.3	58 / 53
203	20,304	1,435	376.5	160 / 14
205	20,476	1,435	377.0	85 / 24
208	20,822	1,435	380.4	27 / 44
212	21,203	1,435	384.6	44 / 15
215	21,487	1,435	387.2	45 / 47
217	21,733	1,435	388.5	39 / 124
222	22,243	1,435	390.8	15 / 117
<b>Bear Creek Tributary 1</b>				
005	504	1,347	456.5 <sup>1</sup>	9 / 93
994	994	1,347	456.5 <sup>1</sup>	128 / 9
014	1,422	1,347	456.5 <sup>1</sup>	116 / 83
020	1,962	1,347	457.7	21 / 161
024	2,448	1,347	459.1	9 / 147
<b>Beaver Creek Tributary 1</b>				
010	1,000	811	237.8 <sup>1</sup>	223 / 267
015	1,500	811	237.8 <sup>1</sup>	46 / 194
021	2,119	782	237.8 <sup>1</sup>	102 / 160
025	2,541	782	237.8 <sup>1</sup>	114 / 177
030	3,000	782	237.8 <sup>1</sup>	86 / 136
034	3,367	782	237.8 <sup>1</sup>	15 / 15
035	3,503	782	237.8 <sup>1</sup>	15 / 15
040	4,000	782	237.8 <sup>1</sup>	27 / 22
045	4,476	782	237.8 <sup>1</sup>	37 / 29
050	5,000	782	237.8 <sup>1</sup>	55 / 60
056	5,584	782	237.8 <sup>1</sup>	24 / 35
060	6,000	782	237.8 <sup>1</sup>	71 / 53
064	6,420	484	237.8 <sup>1</sup>	160 / 70
070	7,000	484	237.8 <sup>1</sup>	8 / 14
075	7,454	484	237.8 <sup>1</sup>	14 / 10
080	8,000	484	238.6	14 / 10
085	8,500	484	245.4	95 / 31
089	8,858	484	249.1	10 / 9
095	9,500	484	257.1	17 / 7
100	10,000	484	266.2	25 / 7
105	10,500	484	275.2	10 / 8
<b>Beaver Creek Tributary 2</b>				
012	1,164	1,302	237.8 <sup>1</sup>	374 / 348



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
015	1,500	1,302	237.8 <sup>1</sup>	260 / 284
020	2,000	1,302	237.8 <sup>1</sup>	219 / 225
025	2,500	1,302	237.8 <sup>1</sup>	185 / 230
030	3,000	1,302	237.8 <sup>1</sup>	21 / 312
035	3,500	1,085	237.8 <sup>1</sup>	279 / 67
040	4,000	1,085	237.8 <sup>1</sup>	234 / 26
045	4,500	1,085	237.8 <sup>1</sup>	227 / 30
048	4,841	1,085	237.8 <sup>1</sup>	210 / 62
053	5,284	1,085	237.8 <sup>1</sup>	15 / 15
054	5,434	1,085	237.8 <sup>1</sup>	15 / 15
055	5,500	1,085	237.8 <sup>1</sup>	60 / 60
060	6,000	1,085	237.8 <sup>1</sup>	32 / 58
065	6,500	1,085	237.8 <sup>1</sup>	27 / 55
069	6,904	907	237.8 <sup>1</sup>	20 / 79
075	7,500	907	237.8 <sup>1</sup>	70 / 25
081	8,073	907	237.8 <sup>1</sup>	87 / 23
085	8,500	907	238.6 <sup>1</sup>	85 / 35
089	8,866	907	238.7	82 / 34
095	9,500	907	241.1	65 / 20
100	10,000	907	244.3	35 / 51
104	10,400	907	245.7	74 / 15
110	11,000	907	249.2	37 / 36
113	11,346	907	251.3	50 / 15
<b>Beaver Creek Tributary 3</b>				
002	200	211	238.6 <sup>1</sup>	45 / 117
005	500	211	238.6 <sup>1</sup>	46 / 12
010	1,005	211	238.6 <sup>1</sup>	16 / 21
015	1,500	211	238.6 <sup>1</sup>	7 / 6
020	2,000	211	238.6 <sup>1</sup>	9 / 6
027	2,666	211	252.3	39 / 10
030	3,000	211	257.0	8 / 10
034	3,403	211	263.2	8 / 4
<b>Blood Run Creek</b>				
002	205	2,714	495.3 <sup>1</sup>	77 / 23
010	1,000	2,714	495.3 <sup>1</sup>	21 / 192
016	1,555	2,714	495.3 <sup>1</sup>	26 / 35
020	2,000	2,714	500.1	60 / 15
024	2,419	2,714	503.3	41 / 18
030	3,027	2,714	507.4	13 / 56
035	3,500	2,714	510.6	14 / 56
039	3,877	2,714	512.5	33 / 33
045	4,500	2,714	515.1	45 / 36
050	5,000	2,714	517.6	19 / 65
054	5,391	2,714	520.1	52 / 22
059	5,894	2,714	522.0	46 / 96

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
065	6,500	2,714	523.4	60 / 35
070	7,000	2,714	525.4	44 / 49
075	7,500	2,714	526.6	36 / 35
079	7,932	2,714	527.6	87 / 27
081	8,091	2,714	528.0	88 / 46
081	8,130	2,714	528.2	88 / 46
084	8,448	2,714	528.2	28 / 42
090	9,047	2,714	529.7	48 / 48
095	9,500	2,714	530.8	40 / 109
100	9,963	2,714	531.6	63 / 33
106	10,593	2,590	533.0	54 / 45
112	11,226	2,590	534.3	152 / 20
119	11,901	2,292	535.8	62 / 31
125	12,500	2,292	540.5	55 / 33
128	12,753	2,292	543.0	38 / 33
128	12,792	2,292	543.4	38 / 33
130	13,000	2,292	545.3	17 / 24
136	13,622	2,292	552.8	35 / 49
140	14,000	2,292	555.2	29 / 38
145	14,500	2,222	556.6	28 / 59
150	15,031	2,222	557.5	30 / 65
157	15,702	2,222	558.4	23 / 36
161	16,072	2,222	559.5	44 / 36
165	16,500	2,222	560.1	42 / 71
172	17,195	2,222	560.9	23 / 56
176	17,594	2,222	561.4	19 / 41
179	17,907	2,222	562.4	45 / 36
186	18,568	2,222	563.7	98 / 36
195	19,471	1,972	565.6	61 / 46
201	20,052	1,972	566.6	147 / 186
207	20,653	1,972	567.1	75 / 69
210	21,000	1,972	568.3	58 / 77
216	21,580	1,972	570.2	48 / 37
219	21,949	1,972	571.4	59 / 75
226	22,579	1,724	572.2	245 / 74
230	23,000	1,724	572.5	118 / 51
238	23,812	1,724	573.8	104 / 12
245	24,457	1,544	574.9	68 / 277
249	24,890	1,544	575.0	26 / 26
249	24,936	1,544	575.7	26 / 26
255	25,527	1,544	577.3	75 / 23
260	25,959	1,544	578.8	45 / 39
266	26,558	1,264	580.3	31 / 138
271	27,071	1,264	581.0	165 / 23
275	27,500	1,264	581.4	105 / 53

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
276	27,582	1,264	583.2	105 / 53
278	27,830	1,264	583.2	237 / 23
279	27,854	1,264	583.2	237 / 23
285	28,520	1,264	583.9	198 / 16
291	29,092	1,264	585.0	26 / 195
296	29,629	1,264	586.5	49 / 100
299	29,916	1,264	587.3	22 / 22
300	30,031	1,264	589.9	22 / 22
303	30,260	1,264	590.6	116 / 96
307	30,745	1,264	591.0	70 / 56
311	31,134	984	592.1	87 / 65
316	31,576	984	593.6	136 / 8
<b>Brooks Creek</b>				
010	956	3,118	318.8 <sup>1</sup>	28 / 38
015	1,475	3,118	320.1	21 / 135
019	1,889	3,118	322.8	40 / 110
029	2,875	3,118	332.6	215 / 40
034	3,442	3,118	336.0	70 / 40
041	4,121	3,118	339.7	130 / 34
047	4,705	3,007	343.6	97 / 109
053	5,333	3,007	350.6	45 / 110
059	5,902	3,007	354.1	26 / 69
070	7,013	3,007	360.4	70 / 27
074	7,422	3,007	363.1	55 / 30
080	7,990	3,007	368.2	22 / 110
084	8,370	3,007	370.6	25 / 140
088	8,822	3,007	372.8	80 / 85
093	9,288	3,007	374.7	150 / 45
098	9,770	3,007	376.3	45 / 100
103	10,282	3,007	378.6	120 / 50
109	10,936	3,007	380.8	30 / 110
116	11,583	3,007	383.4	150 / 50
123	12,303	2,300	385.5	176 / 44
128	12,806	2,300	387.5	62 / 92
135	13,500	2,300	390.5	20 / 101
140	13,983	2,300	392.5	30 / 60
140	14,038	2,300	393.6	30 / 60
143	14,327	2,300	394.7	34 / 103
149	14,881	2,300	397.2	100 / 25
155	15,536	2,300	402.8	55 / 25
160	15,971	2,300	404.5	64 / 59
164	16,403	2,300	405.9	23 / 49
169	16,869	2,300	408.4	57 / 48
174	17,442	2,300	410.8	20 / 80
183	18,257	2,300	415.5	30 / 35

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
189	18,927	2,300	419.3	75 / 65
195	19,468	2,300	421.8	100 / 63
201	20,057	2,300	425.5	65 / 60
206	20,558	1,880	427.3	140 / 40
213	21,267	1,880	428.7	80 / 55
217	21,663	1,880	429.9	60 / 117
222	22,249	1,880	431.4	75 / 50
223	22,304	1,880	433.9	75 / 50
228	22,761	1,880	434.3	33 / 100
233	23,346	1,510	435.3	59 / 81
239	23,880	1,510	436.7	60 / 40
246	24,553	1,510	439.8	60 / 15
253	25,262	1,480	443.6	54 / 36
253	25,262	1,510	443.6	54 / 36
257	25,706	1,180	445.0	55 / 45
260	25,951	1,180	446.0	50 / 50
261	26,147	1,180	446.8	50 / 70
263	26,320	1,180	447.2	65 / 40
265	26,489	1,180	447.7	80 / 16
267	26,716	1,180	448.6	50 / 16
269	26,851	1,180	449.5	18 / 32
271	27,094	1,180	450.6	40 / 40
273	27,337	1,180	451.7	40 / 45
277	27,667	1,180	453.7	55 / 80
280	28,007	1,050	454.5	60 / 35
285	28,529	1,050	455.4	80 / 45
288	28,811	1,050	455.9	150 / 40
291	29,128	1,050	456.5	40 / 75
295	29,471	1,050	457.1	130 / 13
297	29,742	1,050	457.7	55 / 45
301	30,062	1,050	458.9	50 / 75
303	30,311	1,050	459.4	30 / 85
306	30,624	1,050	459.8	55 / 45
309	30,904	1,050	460.4	45 / 45
312	31,184	869	461.6	25 / 170
314	31,415	869	462.4	16 / 160
317	31,657	869	463.7	45 / 100
318	31,844	856	464.4	45 / 95
320	32,048	659	465.0	45 / 45
322	32,169	659	466.3	21 / 145
323	32,282	659	471.4	50 / 48
324	32,366	659	471.4	150 / 100
<b>Brooks Creek Tributary</b>				
001	132	838	444.1 <sup>1</sup>	30 / 12
004	418	838	444.2	20 / 20

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
007	661	838	446.2	28 / 12
009	877	838	447.8	14 / 26
011	1,095	838	450.5	20 / 20
013	1,292	838	453.0	20 / 20
015	1,455	838	455.0	20 / 20
016	1,629	838	456.8	16 / 24
018	1,785	838	457.7	18 / 25
020	1,971	838	458.9	20 / 20
021	2,083	796	460.1	27 / 20
021	2,145	796	460.6	25 / 25
022	2,239	796	461.7	25 / 25
024	2,359	796	462.2	20 / 44
026	2,587	796	463.9	20 / 20
028	2,846	796	466.3	49 / 37
031	3,069	796	467.3	28 / 61
034	3,360	796	469.0	48 / 71
<b>Brooks Creek Tributary 1</b>				
002	195	1,234	384.6 <sup>1</sup>	54 / 18
010	1,019	1,226	391.3	18 / 36
015	1,499	1,226	397.4	8 / 30
<b>Brush Creek</b>				
726	72,576	4,778	498.6	71 / 62
729	72,933	4,778	498.8	23 / 135
735	73,500	4,778	499.5	44 / 51
740	74,000	4,778	500.7	50 / 22
745	74,460	4,778	503.8	28 / 93
750	75,000	4,778	505.8	38 / 60
755	75,485	4,778	507.2	53 / 92
760	76,000	4,778	509.2	277 / 50
765	76,537	4,778	510.0	23 / 41
770	77,027	4,778	515.1	42 / 42
771	77,066	4,778	515.6	42 / 42
776	77,598	4,778	517.2	22 / 25
781	78,051	4,778	520.4	23 / 46
784	78,407	4,778	521.4	65 / 23
789	78,883	4,778	523.1	76 / 21
795	79,500	4,778	525.5	75 / 20
798	79,847	4,778	527.1	133 / 27
806	80,568	4,778	528.4	207 / 23
810	81,016	4,778	528.8	39 / 131
815	81,500	4,778	529.5	26 / 170
820	82,000	4,778	530.1	20 / 75
825	82,523	4,631	530.9	31 / 55
830	83,000	4,631	531.8	23 / 52
835	83,500	4,631	532.5	42 / 31

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
841	84,115	4,631	533.5	55 / 38
845	84,506	4,631	534.1	31 / 72
848	84,846	4,631	535.0	80 / 55
856	85,582	4,631	537.0	92 / 99
861	86,128	4,474	537.9	31 / 37
866	86,574	4,474	539.0	18 / 47
870	86,966	4,474	540.0	30 / 60
875	87,500	4,474	541.2	21 / 53
880	88,023	4,474	543.1	39 / 92
885	88,514	4,474	544.7	80 / 80
886	88,563	4,474	545.1	80 / 80
890	89,000	4,318	546.0	31 / 24
895	89,535	4,318	548.5	18 / 65
900	90,000	4,243	549.4	33 / 50
905	90,452	4,243	550.3	26 / 110
912	91,206	4,243	551.0	113 / 47
922	92,202	3,957	551.7	22 / 113
925	92,500	3,957	551.9	35 / 41
935	93,500	3,957	553.0	194 / 23
<b>Buckhorn Creek</b>				
057	5,723	11,532	159.2	637 / 816
068	6,837	11,532	160.4	38 / 487
082	8,217	11,532	162.6	595 / 38
094	9,367	11,532	163.8	445 / 106
102	10,169	11,532	164.6	100 / 55
108	10,814	11,532	165.4	164 / 38
114	11,443	11,532	166.5	126 / 200
120	11,994	11,532	166.8	54 / 114
127	12,657	11,532	167.8	157 / 116
131	13,124	11,378	168.1	292 / 38
139	13,883	11,378	168.8	38 / 658
149	14,903	11,378	169.2	38 / 389
158	15,842	11,378	170.1	279 / 290
173	17,257	11,353	171.0	109 / 38
188	18,759	11,218	172.6	37 / 524
198	19,754	11,218	173.1	168 / 97
201	20,097	11,218	173.4	57 / 56
201	20,140	11,218	173.8	57 / 56
204	20,422	11,204	174.0	37 / 72
209	20,850	11,204	174.4	37 / 66
212	21,159	11,204	175.0	37 / 139
217	21,656	11,102	175.3	37 / 101
220	22,026	11,102	175.7	85 / 92
225	22,498	11,102	175.8	37 / 37
228	22,753	11,102	176.8	37 / 110

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
230	23,013	10,715	177.0	36 / 70
232	23,182	10,715	176.9	36 / 36
239	23,948	10,715	232.3	250 / 83
240	24,015	10,715	232.3	250 / 83
<b>Buckhorn Creek Tributary 1</b>				
002	179	342	167.9 <sup>1</sup>	5 / 28
004	402	342	167.9 <sup>1</sup>	31 / 5
006	583	342	167.9 <sup>1</sup>	27 / 7
012	1,213	342	176.7	6 / 10
016	1,607	313	185.7	21 / 5
020	1,977	313	193.6	11 / 11
024	2,369	313	199.6	17 / 5
027	2,706	313	209.2	9 / 8
028	2,788	313	213.1	7 / 6
029	2,896	313	219.7	6 / 5
030	3,042	313	226.7	8 / 9
035	3,480	313	236.7	10 / 7
<b>Buckhorn Creek Tributary 2</b>				
002	175	741	175.0 <sup>1</sup>	13 / 13
004	370	741	175.0 <sup>1</sup>	13 / 13
007	671	741	175.0 <sup>1</sup>	13 / 13
009	911	734	174.8	13 / 6
011	1,123	734	178.3	13 / 15
015	1,464	734	182.7	14 / 10
018	1,797	734	187.4	13 / 13
022	2,169	666	195.9	13 / 12
025	2,532	666	202.1	12 / 12
028	2,809	666	207.7	12 / 12
032	3,205	666	214.6	12 / 12
036	3,584	666	221.8	12 / 12
<b>Buckhorn Creek Tributary 3</b>				
007	735	1,782	176.9	53 / 25
010	1,007	1,782	177.0	56 / 30
013	1,303	1,782	177.1	25 / 52
015	1,527	1,782	177.2	16 / 76
016	1,607	1,782	177.3	28 / 28
019	1,932	1,782	180.0	28 / 28
021	2,149	1,782	180.0	44 / 175
026	2,614	1,782	180.1	16 / 127
031	3,092	1,782	180.2	43 / 70
034	3,419	1,782	180.2	36 / 35
038	3,818	1,737	180.6	32 / 84
047	4,657	1,737	182.1	98 / 15
052	5,236	1,737	184.4	18 / 20
056	5,556	1,669	186.5	31 / 40
059	5,931	1,669	189.1	30 / 30

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
062	6,222	1,669	189.0	76 / 44
065	6,475	1,669	190.9	88 / 145
<b>Buckhorn Creek Tributary 4</b>				
000	31	605	232.2 <sup>1</sup>	33 / 75
004	361	605	232.2 <sup>1</sup>	17 / 62
006	622	605	232.2 <sup>1</sup>	6 / 50
010	1,050	605	232.2 <sup>1</sup>	6 / 21
014	1,449	605	237.7	6 / 6
019	1,938	549	245.3	7 / 8
022	2,220	549	250.5	10 / 5
024	2,414	549	258.4	5 / 6
026	2,555	549	282.2	150 / 210
027	2,734	549	282.2	111 / 50
<b>Bush Creek</b>				
002	182	2,832	237.8 <sup>1</sup>	146 / 117
005	500	2,832	237.8 <sup>1</sup>	235 / 336
010	1,000	2,832	237.8 <sup>1</sup>	58 / 334
014	1,421	2,832	237.8 <sup>1</sup>	336 / 152
020	2,000	2,832	237.8 <sup>1</sup>	285 / 193
025	2,500	2,832	237.8 <sup>1</sup>	76 / 276
030	3,000	2,832	237.8 <sup>1</sup>	258 / 127
038	3,837	2,107	237.8 <sup>1</sup>	400 / 88
045	4,500	2,107	237.8 <sup>1</sup>	320 / 250
049	4,883	2,107	237.8 <sup>1</sup>	40 / 25
050	5,030	2,107	237.8 <sup>1</sup>	40 / 25
055	5,500	2,107	237.8 <sup>1</sup>	150 / 80
060	6,000	2,018	237.8 <sup>1</sup>	200 / 150
065	6,500	2,018	237.8 <sup>1</sup>	230 / 135
071	7,138	2,018	237.8 <sup>1</sup>	275 / 94
075	7,500	2,018	237.8 <sup>1</sup>	197 / 186
080	8,000	1,762	237.8 <sup>1</sup>	165 / 521
086	8,607	1,762	237.8 <sup>1</sup>	31 / 398
095	9,500	1,762	239.8	231 / 76
100	10,000	1,762	241.8	112 / 152
105	10,500	1,762	243.4	151 / 54
116	11,626	1,762	246.6	64 / 70
120	12,000	1,762	248.8	47 / 32
125	12,500	1,762	252.6	41 / 38
<b>Cape Fear River</b>				
9810	981,000	79,004	152.2	455 / 732
9815	981,500	79,004	152.7	458 / 585
9820	982,000	79,004	153.2	421 / 442
9825	982,500	79,004	153.7	401 / 454
9830	983,000	79,004	154.2	404 / 433
9835	983,500	78,803	154.6	551 / 448
9840	984,000	78,803	155.2	888 / 462



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
9845	984,500	78,803	155.5	872 / 418
9850	985,000	78,803	156.0	922 / 364
9855	985,500	78,803	156.9	874 / 312
9860	986,000	78,803	157.8	865 / 268
9865	986,500	78,803	158.7	863 / 270
9870	987,000	78,803	159.6	989 / 254
9875	987,500	78,803	160.3	981 / 316
9880	988,000	78,803	161.1	1,537 / 233
9885	988,500	78,803	161.5	1,477 / 206
9889	988,915	78,803	161.9	1,051 / 262
9893	989,301	78,803	165.3	600 / 800
9896	989,647	78,803	165.4	412 / 361
9900	990,000	78,803	165.8	557 / 383
9905	990,500	78,803	166.1	718 / 305
9910	991,000	78,803	166.6	922 / 337
9915	991,500	78,803	166.8	843 / 206
9920	992,000	78,803	167.1	728 / 206
9925	992,500	78,803	167.4	756 / 206
9930	993,000	78,803	167.7	723 / 206
9935	993,500	78,803	168.1	882 / 241
9940	994,000	78,803	168.3	973 / 206
9945	994,500	78,803	168.5	911 / 206
9950	995,000	78,803	168.9	1,098 / 265
9955	995,500	78,803	169.2	1,493 / 303
9960	996,000	78,803	169.4	1,059 / 588
9965	996,500	78,803	169.6	870 / 814
9970	997,000	78,803	169.8	856 / 1,156
9975	997,500	78,803	170.2	1,571 / 1,461
9980	998,000	78,803	170.2	1,560 / 1,627
9985	998,500	78,803	170.4	746 / 1,813
9990	999,000	77,673	170.5	426 / 1,891
9995	999,500	77,673	170.7	301 / 2,095
10002	1,000,191	77,673	170.8	198 / 1,968
10003	1,000,295	77,673	170.8	700 / 700
10003	1,000,345	77,673	171.2	700 / 700
10010	1,001,000	77,673	171.7	198 / 2,836
10015	1,001,500	77,673	171.8	280 / 2,806
10020	1,002,000	77,673	171.9	198 / 2,455
10025	1,002,500	77,673	172.0	254 / 1,975
10030	1,003,000	77,673	172.1	520 / 1,847
10035	1,003,500	77,673	172.2	684 / 2,503
10040	1,004,000	77,673	172.4	1,214 / 2,670
10045	1,004,500	77,673	172.4	605 / 2,922
10050	1,005,000	77,673	172.5	198 / 2,956
10055	1,005,500	77,673	172.6	229 / 2,937

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
10060	1,006,000	77,673	172.6	468 / 3,601
10065	1,006,500	77,673	172.7	695 / 3,385
10070	1,007,000	77,673	172.8	955 / 3,387
10075	1,007,500	77,673	172.8	1,204 / 3,599
10080	1,008,000	77,673	172.9	1,700 / 2,000
10085	1,008,500	77,399	172.9	1,200 / 2,300
10090	1,009,000	77,399	173.0	1,000 / 1,500
10095	1,009,500	77,399	173.0	1,300 / 500
10100	1,010,000	77,399	173.0	1,477 / 183
10101	1,010,076	77,399	173.1	1,300 / 200
10101	1,010,116	77,399	174.0	1,300 / 200
10105	1,010,500	77,399	174.2	2,364 / 183
10110	1,011,000	77,399	174.4	3,190 / 183
10115	1,011,500	77,399	174.5	3,562 / 196
10120	1,012,000	77,399	174.6	4,139 / 419
10125	1,012,500	77,399	174.7	3,980 / 707
10130	1,013,000	77,399	174.8	3,930 / 1,202
10135	1,013,500	77,399	174.9	3,811 / 1,450
10140	1,014,000	77,399	175.0	4,025 / 1,638
10145	1,014,500	77,399	175.0	2,945 / 1,714
10150	1,015,000	77,399	175.1	3,045 / 2,123
10155	1,015,500	76,880	175.1	183 / 2,222
10160	1,016,000	76,880	175.3	182 / 2,694
10165	1,016,500	76,880	175.5	182 / 2,299
10170	1,017,000	76,880	175.6	182 / 2,323
10175	1,017,500	76,880	175.8	182 / 2,769
10180	1,018,000	76,880	175.9	182 / 2,919
10185	1,018,500	76,880	176.0	182 / 3,464
10190	1,019,000	76,880	176.0	182 / 3,881
10195	1,019,500	76,880	176.2	182 / 4,203
10200	1,020,000	76,880	176.5	1,821 / 5,030
10206	1,020,624	76,846	176.5	182 / 4,573
<b>Cedar Creek</b>				
101	10,095	3,391	232.5 <sup>1</sup>	21 / 426
112	11,231	3,391	232.5 <sup>1</sup>	326 / 601
125	12,497	3,391	232.5 <sup>1</sup>	161 / 233
133	13,329	3,391	232.5 <sup>1</sup>	182 / 604
138	13,822	3,391	232.5 <sup>1</sup>	37 / 725
144	14,390	3,391	232.5 <sup>1</sup>	21 / 417
151	15,059	3,391	232.5 <sup>1</sup>	254 / 91
155	15,537	3,391	232.5 <sup>1</sup>	418 / 21
163	16,271	1,970	232.5 <sup>1</sup>	366 / 88
167	16,688	1,970	232.5 <sup>1</sup>	327 / 139
174	17,393	1,970	232.5 <sup>1</sup>	22 / 435
178	17,814	1,970	232.5 <sup>1</sup>	134 / 114

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
183	18,291	1,970	232.5 <sup>1</sup>	374 / 17
189	18,856	1,970	232.5 <sup>1</sup>	425 / 118
193	19,328	1,970	232.5 <sup>1</sup>	32 / 32
194	19,396	1,970	232.5 <sup>1</sup>	32 / 32
201	20,088	1,970	233.2	269 / 17
205	20,538	1,970	233.6	346 / 45
209	20,877	1,970	233.8	273 / 17
214	21,360	1,970	234.3	375 / 17
216	21,568	1,812	234.5	349 / 83
224	22,356	1,812	235.4	331 / 16
233	23,289	1,812	238.6	244 / 16
242	24,183	1,812	242.2	257 / 16
248	24,832	1,812	244.7	232 / 16
258	25,827	1,812	248.1	173 / 16
<b>Cedar Creek Tributary 1</b>				
005	508	2,177	232.5 <sup>1</sup>	351 / 17
017	1,665	2,177	232.5 <sup>1</sup>	289 / 53
030	2,955	2,177	232.5 <sup>1</sup>	479 / 17
039	3,923	2,177	232.5 <sup>1</sup>	351 / 17
047	4,694	2,177	232.5 <sup>1</sup>	398 / 17
047	4,733	2,177	232.5 <sup>1</sup>	329 / 25
048	4,803	2,177	235.6	329 / 25
059	5,944	1,702	235.8	386 / 132
070	6,996	1,702	236.2	296 / 15
076	7,605	1,702	236.8	345 / 15
083	8,267	1,702	237.7	365 / 15
089	8,909	1,702	238.9	250 / 43
096	9,631	1,702	241.5	132 / 15
107	10,661	1,499	244.5	14 / 334
112	11,246	1,499	246.1	142 / 89
126	12,552	1,499	251.6	53 / 131
<b>Cedar Creek Tributary 2</b>				
012	1,225	870	235.6 <sup>1</sup>	115 / 36
017	1,670	870	235.6 <sup>1</sup>	109 / 88
023	2,267	870	235.9	60 / 100
027	2,721	870	237.9	67 / 136
033	3,348	870	240.7	9 / 93
038	3,814	870	243.2	50 / 74
039	3,859	870	243.0	50 / 74
044	4,354	870	246.3	60 / 49
044	4,441	870	246.7	24 / 51
045	4,481	870	247.0	24 / 51
050	5,038	870	250.1	28 / 105
058	5,827	870	252.8	79 / 46
063	6,337	870	255.9	88 / 32

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
068	6,808	870	258.6	138 / 9
<b>Collins Creek</b>				
003	335	4,779	400.8 <sup>1</sup>	18 / 18
008	823	4,779	400.8 <sup>1</sup>	18 / 17
014	1,356	4,779	400.8 <sup>1</sup>	20 / 17
019	1,894	4,779	407.8	18 / 20
024	2,436	4,779	425.1	51 / 60
027	2,691	4,779	429.3	60 / 60
027	2,735	4,779	429.8	60 / 60
033	3,315	4,779	431.6	21 / 36
039	3,882	4,779	437.3	35 / 33
044	4,437	4,779	439.2	16 / 41
050	4,951	4,779	440.4	16 / 75
055	5,479	4,779	441.0	128 / 51
061	6,087	4,779	441.8	44 / 62
066	6,555	4,779	442.2	91 / 25
071	7,082	4,779	443.1	40 / 57
076	7,622	4,779	443.9	24 / 80
081	8,067	4,779	444.5	49 / 125
086	8,648	4,779	444.9	16 / 116
092	9,223	4,779	445.4	51 / 45
096	9,611	4,779	446.2	40 / 160
103	10,297	4,779	447.1	576 / 25
109	10,885	4,779	447.6	88 / 127
113	11,346	4,779	448.2	36 / 335
119	11,877	4,253	448.7	84 / 45
125	12,524	4,253	449.8	111 / 72
132	13,167	4,253	450.5	118 / 73
137	13,737	4,253	450.9	53 / 48
<b>Crooked Creek</b>				
088	8,771	2,208	237.8 <sup>1</sup>	25 / 20
<b>Crows Creek</b>				
001	142	1,365	375.4 <sup>1</sup>	22 / 28
002	162	1,365	375.4 <sup>1</sup>	15 / 24
002	218	1,365	375.4 <sup>1</sup>	15 / 24
003	285	1,365	375.4 <sup>1</sup>	9 / 76
008	811	1,365	375.4 <sup>1</sup>	55 / 104
014	1,363	1,365	375.4 <sup>1</sup>	130 / 4
020	1,994	1,365	375.4 <sup>1</sup>	60 / 37
020	2,047	1,365	375.4 <sup>1</sup>	60 / 37
024	2,432	1,365	375.4 <sup>1</sup>	21 / 53
029	2,904	1,365	378.3	41 / 27
035	3,530	1,365	380.1	61 / 73
043	4,280	1,175	381.4	88 / 59
050	4,992	1,175	383.6	53 / 29
056	5,631	1,175	385.5	5 / 182

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
061	6,121	1,175	386.3	70 / 10
065	6,549	1,175	387.7	30 / 30
066	6,604	1,175	391.1	30 / 30
072	7,189	1,175	391.2	10 / 29
082	8,187	1,175	396.1	30 / 176
087	8,733	1,175	397.7	10 / 104
094	9,425	1,175	400.2	53 / 66
099	9,869	1,175	402.0	104 / 26
102	10,225	823	403.3	35 / 35
103	10,261	823	403.4	35 / 35
108	10,822	823	406.3	83 / 15
<b>Cub Creek</b>				
013	1,309	2,828	237.8 <sup>1</sup>	284 / 289
020	2,000	2,828	237.8 <sup>1</sup>	149 / 200
025	2,500	2,828	237.8 <sup>1</sup>	97 / 265
029	2,922	2,828	237.8 <sup>1</sup>	70 / 247
039	3,925	2,828	237.8 <sup>1</sup>	165 / 252
045	4,500	2,828	237.8 <sup>1</sup>	145 / 174
050	5,000	2,828	237.8 <sup>1</sup>	159 / 244
055	5,500	2,828	237.8 <sup>1</sup>	208 / 281
060	6,000	2,828	237.8 <sup>1</sup>	282 / 104
065	6,500	2,828	237.8 <sup>1</sup>	228 / 152
071	7,079	2,828	237.8 <sup>1</sup>	191 / 197
076	7,644	2,657	237.8 <sup>1</sup>	246 / 185
080	8,000	2,657	237.8 <sup>1</sup>	221 / 134
085	8,500	2,657	237.8 <sup>1</sup>	58 / 199
091	9,140	2,657	237.8 <sup>1</sup>	82 / 244
100	10,000	2,657	237.8 <sup>1</sup>	164 / 189
106	10,558	2,657	237.8 <sup>1</sup>	347 / 76
111	11,108	2,657	237.8 <sup>1</sup>	133 / 351
115	11,500	2,657	238.0	239 / 350
125	12,545	2,445	239.6	100 / 396
130	13,000	2,445	239.9	13 / 519
136	13,587	2,445	240.2	165 / 140
140	14,000	2,445	240.8	328 / 36
146	14,584	2,228	241.7	243 / 99
150	15,000	2,228	242.4	209 / 97
155	15,500	2,228	243.3	237 / 13
160	16,049	2,228	244.3	60 / 362
165	16,500	2,228	244.9	94 / 259
170	17,000	2,228	246.2	67 / 169
175	17,500	2,228	247.5	389 / 13
182	18,211	2,228	249.7	99 / 213
189	18,872	2,228	255.3	153 / 384
195	19,520	2,228	255.6	44 / 272

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
199	19,863	2,228	255.9	55 / 353
207	20,662	2,228	256.5	465 / 12
211	21,065	2,228	257.1	209 / 13
214	21,443	2,228	259.3	263 / 13
218	21,809	2,228	260.6	15 / 100
224	22,432	2,026	263.4	31 / 161
229	22,855	2,026	265.0	18 / 229
234	23,355	2,026	266.7	12 / 249
238	23,843	2,026	268.8	112 / 87
244	24,355	2,026	270.6	69 / 30
<b>Deep River</b>				
005	5	54,900	176.5	765 / 48
010	964	54,900	176.4	241 / 157
017	1,711	54,900	176.7	449 / 986
022	2,250	54,900	176.7	363 / 938
028	2,791	54,900	176.8	157 / 157
038	3,750	54,900	177.0	157 / 157
046	4,621	54,900	177.3	293 / 440
055	5,491	54,900	177.5	234 / 157
063	6,317	54,900	177.7	322 / 184
068	6,780	54,900	177.8	157 / 157
077	7,737	54,900	178.1	358 / 249
084	8,435	54,900	178.2	271 / 157
091	9,125	54,900	178.4	358 / 187
102	10,209	54,900	178.6	157 / 157
114	11,403	54,900	178.9	170 / 157
117	11,676	54,900	178.5	1,600 / 725
117	11,721	54,900	181.6	1,600 / 725
127	12,682	54,900	182.2	278 / 275
133	13,251	54,900	182.3	304 / 196
142	14,222	54,900	182.6	340 / 342
143	14,278	54,900	182.8	340 / 342
150	15,000	54,900	183.0	173 / 194
154	15,360	54,900	183.1	300 / 320
155	15,492	54,900	183.5	300 / 320
160	16,038	54,900	183.6	288 / 186
169	16,941	54,900	183.8	241 / 259
171	17,055	54,900	185.6	400 / 260
178	17,798	54,900	185.6	157 / 157
190	18,971	54,900	186.9	280 / 157
197	19,710	54,900	187.8	338 / 157
208	20,774	54,900	189.5	157 / 157
220	21,962	54,900	191.8	157 / 157
226	22,584	54,900	193.7	157 / 157
232	23,250	54,900	194.9	157 / 157

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
237	23,665	54,600	196.4	156 / 156
242	24,234	54,600	197.6	156 / 156
249	24,948	54,600	198.7	156 / 156
255	25,500	54,600	199.7	220 / 156
262	26,159	54,600	200.4	156 / 156
270	27,000	54,600	201.3	156 / 156
278	27,750	54,600	202.0	156 / 156
286	28,599	54,600	203.1	156 / 331
294	29,374	54,600	203.7	156 / 173
300	30,000	54,600	204.1	156 / 156
308	30,750	54,500	204.9	155 / 155
315	31,463	54,500	205.6	155 / 155
322	32,224	54,500	206.4	245 / 155
328	32,783	54,500	206.8	209 / 300
337	33,679	54,500	207.3	155 / 155
344	34,433	54,500	207.9	264 / 203
351	35,102	54,500	208.5	155 / 155
359	35,928	54,500	209.2	155 / 155
367	36,718	54,500	210.3	133 / 133
374	37,428	53,200	212.1	366 / 203
382	38,178	53,200	213.0	490 / 155
391	39,092	53,200	213.8	522 / 133
397	39,678	53,200	214.3	506 / 133
404	40,428	53,200	214.9	597 / 133
412	41,178	53,200	215.4	688 / 138
420	42,042	53,200	215.9	435 / 269
428	42,806	53,200	216.3	300 / 254
434	43,428	53,200	216.6	209 / 172
442	44,163	53,200	217.2	243 / 133
449	44,892	53,200	217.6	215 / 183
457	45,741	53,200	218.2	133 / 394
464	46,363	53,200	218.5	133 / 419
471	47,105	53,200	218.8	133 / 322
476	47,640	53,200	219.1	201 / 212
484	48,397	53,200	219.5	219 / 148
493	49,267	53,200	219.9	236 / 133
501	50,058	53,200	220.3	205 / 133
510	50,958	53,200	220.9	260 / 213
515	51,472	53,200	221.1	280 / 192
521	52,128	53,200	221.4	332 / 133
529	52,926	53,200	221.7	438 / 133
537	53,676	53,200	222.0	488 / 133
548	54,774	53,200	222.4	224 / 414
554	55,361	53,100	222.6	204 / 476
557	55,715	53,100	222.7	132 / 416

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
558	55,767	53,100	223.0	132 / 416
562	56,157	53,100	223.2	191 / 418
569	56,920	53,100	223.5	132 / 403
574	57,420	53,100	223.7	132 / 418
581	58,118	53,100	223.9	355 / 131
593	59,299	53,100	224.3	388 / 357
601	60,068	53,100	224.5	380 / 271
608	60,752	53,100	224.7	475 / 152
612	61,190	53,100	224.8	475 / 131
628	62,805	53,100	225.2	500 / 135
640	63,968	52,900	225.5	269 / 130
645	64,491	52,900	225.7	292 / 130
652	65,170	52,900	226.1	321 / 596
659	65,920	52,900	226.3	137 / 918
667	66,670	52,900	226.4	141 / 956
682	68,170	52,900	226.6	386 / 529
689	68,920	52,900	226.8	473 / 391
697	69,747	52,900	226.9	434 / 218
704	70,420	52,900	227.0	350 / 130
711	71,136	52,900	227.2	318 / 130
717	71,737	52,900	227.4	416 / 130
725	72,499	52,900	227.6	774 / 130
741	74,080	52,900	227.8	128 / 128
749	74,920	52,700	228.1	199 / 386
757	75,687	52,700	228.2	128 / 324
764	76,420	52,700	228.4	178 / 600
778	77,827	52,700	228.8	162 / 128
787	78,670	52,700	229.0	171 / 130
794	79,408	52,700	229.2	128 / 128
801	80,149	52,700	229.4	128 / 128
809	80,917	52,700	229.6	128 / 360
817	81,667	52,700	229.8	341 / 200
824	82,356	52,700	230.0	410 / 353
832	83,167	52,700	230.0	128 / 128
839	83,917	52,700	230.2	128 / 128
848	84,759	52,700	230.4	154 / 128
854	85,417	52,700	230.6	128 / 142
862	86,167	52,700	230.7	128 / 128
863	86,314	52,700	230.4	170 / 175
864	86,366	52,700	231.0	170 / 175
864	86,445	52,700	231.6	128 / 128
865	86,515	52,700	231.6	192 / 203
865	86,549	52,700	231.6	192 / 203
869	86,918	52,700	232.2	128 / 490
875	87,547	52,700	232.3	128 / 340



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
882	88,203	52,700	232.5	640 / 247
892	89,242	52,700	232.9	500 / 200
901	90,144	52,600	232.7	500 / 200
909	90,908	52,600	232.8	200 / 200
916	91,612	52,600	232.9	177 / 171
917	91,657	52,600	232.8	177 / 171
922	92,160	52,600	234.9	571 / 127
930	92,964	52,600	235.0	694 / 127
936	93,567	52,600	235.1	883 / 127
944	94,368	52,600	235.2	1,042 / 145
950	94,952	52,600	235.3	829 / 227
959	95,882	52,600	235.4	460 / 352
966	96,592	52,600	235.4	226 / 333
973	97,299	52,600	235.6	278 / 246
974	97,421	52,600	235.6	254 / 254
976	97,559	52,600	235.8	254 / 254
978	97,836	52,600	236.2	286 / 382
989	98,937	52,600	236.4	243 / 291
995	99,458	52,500	236.4	347 / 146
1003	100,266	52,500	236.5	289 / 126
1011	101,082	52,500	236.6	300 / 126
1018	101,824	52,500	236.7	276 / 126
1024	102,358	52,500	236.8	299 / 126
1034	103,378	52,500	237.0	270 / 126
1041	104,066	52,500	237.1	356 / 126
1045	104,532	52,500	237.1	380 / 126
1056	105,585	52,500	237.3	380 / 128
1063	106,310	52,500	237.4	606 / 126
1072	107,246	52,500	237.6	315 / 477
1081	108,141	52,500	237.6	424 / 286
1092	109,248	52,000	237.8	406 / 668
1098	109,845	52,000	237.9	429 / 456
1104	110,366	52,000	238.0	586 / 402
1113	111,326	52,000	238.1	998 / 122
1122	112,229	52,000	238.2	1,177 / 169
1131	113,148	52,000	238.3	1,147 / 123
1138	113,783	52,000	238.4	815 / 342
1148	114,801	52,000	238.5	122 / 1,114
1157	115,735	52,000	238.7	122 / 1,959
1168	116,777	52,000	238.8	122 / 3,286
1182	118,209	52,000	238.9	122 / 3,142
1192	119,166	52,000	238.9	122 / 3,015
1197	119,653	52,000	239.0	238 / 1,700
1197	119,701	52,000	239.1	238 / 1,700
1211	121,108	52,000	239.2	536 / 2,264

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1226	122,608	52,000	239.3	480 / 333
1234	123,358	52,000	239.4	197 / 759
1241	124,108	52,000	239.4	197 / 570
1249	124,858	52,000	239.5	196 / 871
1258	125,829	52,000	239.6	926 / 366
1265	126,456	52,000	239.6	1,148 / 256
1271	127,108	52,000	239.7	882 / 548
1279	127,858	52,000	239.8	769 / 512
1286	128,608	52,000	239.8	891 / 367
1295	129,515	52,000	239.9	954 / 335
1301	130,108	52,000	239.9	837 / 196
1316	131,608	52,000	240.0	450 / 290
1324	132,428	51,900	240.1	350 / 600
1326	132,571	51,900	240.1	350 / 600
1337	133,741	51,600	241.0	616 / 652
1348	134,754	51,600	241.2	914 / 73
1356	135,582	51,600	241.7	728 / 107
1364	136,396	51,600	242.4	523 / 114
1371	137,093	51,600	242.8	367 / 73
1378	137,803	51,600	243.2	400 / 112
1386	138,608	51,600	243.8	523 / 80
1394	139,416	51,500	244.5	676 / 78
1401	140,114	51,500	244.7	548 / 141
1412	141,159	51,500	245.4	539 / 154
1421	142,080	51,500	245.9	621 / 118
1428	142,849	51,500	246.3	685 / 102
1435	143,504	51,500	246.9	749 / 145
1447	144,727	51,500	247.6	445 / 250
1460	145,997	51,500	248.2	308 / 774
1465	146,528	51,500	248.4	157 / 835
1478	147,830	51,500	249.0	696 / 608
1493	149,265	51,500	249.4	1,302 / 48
1500	150,039	51,500	249.4	1,389 / 134
1520	151,957	51,500	249.7	235 / 1,110
1526	152,607	51,500	249.8	85 / 1,096
1533	153,297	51,400	250.2	1,317 / 969
<b>Deep River Tributary 5</b>				
008	821	511	239.5 <sup>1</sup>	16 / 17
014	1,418	511	239.5 <sup>1</sup>	15 / 45
017	1,704	511	239.5 <sup>1</sup>	21 / 28
022	2,153	511	239.5 <sup>1</sup>	16 / 16
026	2,569	511	239.5 <sup>1</sup>	18 / 19
026	2,627	511	239.5 <sup>1</sup>	18 / 19
028	2,804	511	239.5 <sup>1</sup>	32 / 21
030	2,979	511	239.5 <sup>1</sup>	41 / 28

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
036	3,570	511	242.2	15 / 15
043	4,333	511	262.5	15 / 26
048	4,780	511	273.8	18 / 17
<b>Deep River Tributary 6</b>				
005	456	701	239.5 <sup>1</sup>	31 / 37
009	868	701	239.5 <sup>1</sup>	15 / 15
013	1,331	701	239.5 <sup>1</sup>	89 / 15
018	1,808	701	239.5 <sup>1</sup>	16 / 26
021	2,055	701	239.5 <sup>1</sup>	24 / 18
021	2,129	701	239.5 <sup>1</sup>	24 / 18
025	2,502	701	239.5 <sup>1</sup>	16 / 32
029	2,903	701	239.5 <sup>1</sup>	21 / 16
035	3,496	701	239.5 <sup>1</sup>	51 / 55
040	3,952	701	239.5 <sup>1</sup>	41 / 29
044	4,353	701	240.8	35 / 20
050	5,012	701	245.4	15 / 37
056	5,565	701	249.2	17 / 29
060	5,978	701	252.3	14 / 50
<b>Deep River Tributary 7</b>				
036	3,632	1,103	239.9 <sup>1</sup>	38 / 30
042	4,159	1,103	239.9 <sup>1</sup>	210 / 31
044	4,433	1,103	239.9 <sup>1</sup>	100 / 85
051	5,092	1,103	239.9 <sup>1</sup>	80 / 130
056	5,647	1,103	239.9 <sup>1</sup>	162 / 147
062	6,241	1,103	239.9 <sup>1</sup>	97 / 158
063	6,307	1,103	239.9 <sup>1</sup>	97 / 158
067	6,671	1,103	239.9 <sup>1</sup>	15 / 151
074	7,396	1,103	239.9 <sup>1</sup>	33 / 66
079	7,917	1,103	239.9 <sup>1</sup>	39 / 62
084	8,376	1,103	239.9 <sup>1</sup>	15 / 110
087	8,714	1,103	241.4	65 / 44
092	9,195	1,103	244.3	70 / 55
097	9,732	1,103	248.0	119 / 15
102	10,160	1,103	250.2	127 / 36
108	10,762	1,103	254.2	87 / 17
113	11,325	1,103	258.5	17 / 79
123	12,292	783	266.0	113 / 26
130	12,962	783	273.2	17 / 70
135	13,459	783	280.5	27 / 24
138	13,764	783	286.3	12 / 25
143	14,340	783	294.4	25 / 17
148	14,769	783	299.6	17 / 17
<b>Deep River Tributary 8</b>				
002	238	601	240.1 <sup>1</sup>	10 / 10
003	334	601	240.1 <sup>1</sup>	11 / 11
004	370	601	240.1 <sup>1</sup>	11 / 11

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
005	509	601	240.1 <sup>1</sup>	10 / 12
006	581	601	240.1 <sup>1</sup>	100 / 110
010	996	601	240.1 <sup>1</sup>	163 / 156
013	1,339	601	240.1 <sup>1</sup>	135 / 141
016	1,623	601	240.1 <sup>1</sup>	188 / 122
022	2,193	601	240.1 <sup>1</sup>	80 / 126
028	2,788	601	240.1 <sup>1</sup>	97 / 97
033	3,274	601	240.1 <sup>1</sup>	24 / 102
038	3,785	601	240.1 <sup>1</sup>	50 / 42
044	4,350	601	240.1 <sup>1</sup>	41 / 12
046	4,606	601	240.1 <sup>1</sup>	17 / 12
051	5,079	601	242.4	13 / 22
054	5,421	601	245.1	11 / 11
<b>Dry Creek</b>				
300	30,023	3,504	458.9	21 / 216
306	30,641	3,504	459.5	200 / 35
312	31,193	3,504	460.2	25 / 135
320	32,033	3,504	462.1	50 / 202
327	32,706	3,504	463.4	80 / 20
336	33,602	3,325	465.8	25 / 45
342	34,244	3,325	467.8	80 / 41
348	34,843	3,325	468.7	184 / 25
355	35,549	3,325	469.5	118 / 136
364	36,353	3,325	470.4	80 / 25
370	37,042	3,325	471.8	50 / 47
377	37,656	3,325	472.5	75 / 26
383	38,268	3,325	473.4	210 / 25
389	38,938	3,325	473.9	26 / 184
396	39,598	3,325	474.7	16 / 146
403	40,252	3,136	475.5	48 / 119
411	41,051	3,136	475.9	64 / 361
415	41,517	3,136	476.3	22 / 54
418	41,847	3,136	478.7	62 / 31
419	41,887	3,136	480.0	62 / 31
425	42,498	2,943	481.4	29 / 106
430	43,034	2,943	482.8	89 / 53
436	43,563	2,943	483.8	106 / 104
440	44,038	2,943	484.5	220 / 121
445	44,535	2,943	485.0	158 / 130
451	45,130	2,943	485.7	286 / 28
459	45,896	2,943	486.4	80 / 150
460	45,964	2,943	486.3	80 / 150
466	46,575	2,763	487.4	40 / 361
472	47,194	2,763	488.2	23 / 139
479	47,871	2,763	490.2	96 / 63

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
484	48,428	2,595	491.6	110 / 20
490	48,950	2,595	492.7	39 / 36
497	49,693	2,449	495.3	26 / 26
497	49,746	2,449	496.0	26 / 26
505	50,515	2,449	497.4	65 / 20
512	51,198	2,449	499.5	40 / 75
519	51,915	2,449	501.6	61 / 86
526	52,622	2,449	503.5	69 / 31
532	53,171	2,278	505.4	46 / 63
537	53,695	2,278	506.6	220 / 30
544	54,375	2,278	508.0	45 / 135
550	55,015	2,278	510.8	103 / 47
556	55,589	2,278	512.5	25 / 130
564	56,373	2,278	514.8	81 / 44
570	57,008	2,278	516.7	11 / 98
576	57,597	2,278	518.1	132 / 60
583	58,317	2,278	519.1	64 / 131
590	58,951	2,278	520.0	86 / 65
595	59,468	2,278	520.5	53 / 51
596	59,552	2,278	522.4	53 / 51
603	60,290	2,278	522.8	86 / 81
610	60,996	1,649	524.0	57 / 208
616	61,619	1,649	524.8	147 / 86
623	62,307	1,649	526.1	93 / 91
629	62,920	1,649	527.3	75 / 95
638	63,776	679	529.1	25 / 80
645	64,523	679	532.3	50 / 55
<b>East Price Creek</b>				
067	6,676	1,500	406.5	35 / 50
072	7,158	1,500	409.1	35 / 64
075	7,547	1,500	411.8	65 / 20
080	8,043	1,500	416.1	30 / 50
084	8,417	1,500	418.6	30 / 50
088	8,831	1,500	423.5	20 / 60
092	9,195	1,500	425.8	15 / 64
<b>Folkner Branch</b>				
072	7,184	1,120	237.8 <sup>1</sup>	163 / 16
080	8,000	1,120	237.8 <sup>1</sup>	181 / 58
085	8,500	1,120	237.8 <sup>1</sup>	77 / 59
090	9,000	1,120	237.8 <sup>1</sup>	71 / 56
095	9,500	1,120	237.8 <sup>1</sup>	48 / 150
100	10,000	1,120	237.8 <sup>1</sup>	70 / 32
105	10,500	1,120	237.8 <sup>1</sup>	38 / 108
110	11,000	1,120	237.8 <sup>1</sup>	59 / 68
115	11,500	765	237.8 <sup>1</sup>	73 / 28

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
120	12,000	765	237.8 <sup>1</sup>	69 / 22
125	12,500	765	237.8 <sup>1</sup>	31 / 36
131	13,056	765	239.2	33 / 23
131	13,096	765	240.3	33 / 23
135	13,500	765	242.2	51 / 27
140	14,000	765	246.2	40 / 29
145	14,500	765	250.0	43 / 17
151	15,053	765	252.3	21 / 21
151	15,128	765	254.4	21 / 21
155	15,500	765	255.6	6 / 30
<b>Georges Creek</b>				
037	3,749	3,681	224.9 <sup>1</sup>	303 / 539
047	4,726	3,653	224.9 <sup>1</sup>	311 / 111
051	5,071	3,653	224.9 <sup>1</sup>	512 / 53
056	5,608	3,653	224.9 <sup>1</sup>	498 / 17
062	6,214	3,653	224.9 <sup>1</sup>	206 / 306
066	6,567	3,653	224.9 <sup>1</sup>	134 / 544
073	7,293	3,653	224.9 <sup>1</sup>	261 / 342
078	7,757	3,653	224.9 <sup>1</sup>	129 / 507
084	8,412	3,494	224.9 <sup>1</sup>	180 / 442
089	8,943	3,494	224.9 <sup>1</sup>	28 / 31
090	8,995	3,494	224.9 <sup>1</sup>	28 / 31
095	9,544	3,494	224.9 <sup>1</sup>	455 / 16
101	10,063	3,133	224.9 <sup>1</sup>	589 / 15
102	10,216	3,133	224.9 <sup>1</sup>	448 / 15
108	10,828	3,133	224.9 <sup>1</sup>	385 / 122
114	11,408	3,133	224.9 <sup>1</sup>	448 / 15
128	12,836	3,133	224.9 <sup>1</sup>	427 / 77
135	13,450	3,065	224.9 <sup>1</sup>	274 / 56
137	13,747	3,065	224.9 <sup>1</sup>	378 / 15
142	14,204	3,065	224.9 <sup>1</sup>	369 / 15
146	14,621	3,065	224.9 <sup>1</sup>	368 / 15
154	15,419	3,065	224.9 <sup>1</sup>	359 / 15
156	15,645	3,065	224.9 <sup>1</sup>	349 / 15
163	16,332	3,065	225.5	462 / 15
177	17,725	3,065	227.4	370 / 15
187	18,732	3,065	228.2	633 / 15
194	19,351	3,065	228.7	529 / 15
202	20,218	3,065	229.8	132 / 308
206	20,635	1,920	230.4	216 / 301
207	20,686	1,920	232.1	216 / 301
208	20,798	1,920	232.1	272 / 380
217	21,743	1,920	232.5	143 / 128
220	21,992	1,920	232.8	167 / 93
230	22,959	1,920	233.7	341 / 49

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
239	23,859	1,920	234.4	270 / 68
243	24,310	1,920	235.0	447 / 26
248	24,790	1,920	235.7	136 / 124
250	25,040	1,920	236.4	200 / 45
252	25,232	1,920	237.0	229 / 11
258	25,849	1,920	238.4	273 / 97
265	26,482	1,920	239.6	182 / 245
269	26,888	1,920	240.4	175 / 163
272	27,207	1,920	241.1	185 / 154
280	27,998	1,920	242.7	246 / 11
285	28,491	1,920	243.5	411 / 77
289	28,944	1,539	244.1	195 / 41
292	29,232	1,539	245.0	178 / 28
299	29,888	1,539	246.6	149 / 86
304	30,424	1,539	247.4	248 / 10
308	30,811	1,539	248.1	94 / 144
311	31,097	1,539	248.8	178 / 10
316	31,633	1,539	250.6	94 / 74
318	31,799	1,539	251.5	141 / 10
323	32,309	1,467	253.4	83 / 70
327	32,741	1,467	254.4	56 / 154
331	33,085	1,467	255.9	9 / 208
335	33,509	1,467	258.8	81 / 161
338	33,831	1,467	260.3	9 / 247
<b>Georges Creek Tributary 1</b>				
005	479	409	224.9 <sup>1</sup>	9 / 116
009	893	409	224.9 <sup>1</sup>	8 / 57
011	1,141	409	224.9 <sup>1</sup>	10 / 10
012	1,191	409	224.9 <sup>1</sup>	10 / 50
014	1,446	409	224.9 <sup>1</sup>	45 / 42
021	2,092	409	226.6	8 / 40
027	2,724	409	231.5	9 / 66
032	3,165	409	235.0	18 / 27
036	3,582	409	238.8	10 / 66
042	4,194	409	243.7	8 / 56
<b>Georges Creek Tributary 2</b>				
011	1,141	1,064	224.9 <sup>1</sup>	4 / 215
015	1,500	1,064	224.9 <sup>1</sup>	114 / 35
021	2,114	1,064	224.9 <sup>1</sup>	123 / 31
026	2,550	1,064	224.9 <sup>1</sup>	41 / 79
032	3,169	1,064	225.2	97 / 36
035	3,547	1,064	226.3	196 / 4
042	4,157	974	227.9	180 / 20
045	4,500	974	228.9	26 / 124
052	5,194	974	231.4	160 / 69

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
056	5,574	974	232.9	3 / 150
059	5,860	974	234.2	20 / 158
064	6,403	974	236.7	69 / 32
<b>Greenbriar Creek</b>				
002	239	2,951	586.1 <sup>1</sup>	283 / 244
005	533	2,951	586.1 <sup>1</sup>	114 / 48
010	1,000	2,951	586.1 <sup>1</sup>	61 / 64
015	1,500	2,951	586.1 <sup>1</sup>	72 / 60
022	2,233	2,878	586.1 <sup>1</sup>	105 / 322
026	2,586	2,878	586.1 <sup>1</sup>	80 / 83
031	3,090	2,878	586.3	27 / 84
035	3,500	2,878	586.9	79 / 36
040	4,000	2,878	587.6	33 / 59
045	4,500	2,878	588.7	31 / 61
050	5,000	2,878	589.9	57 / 61
055	5,500	2,878	590.7	62 / 73
061	6,058	2,878	592.4	16 / 86
065	6,476	2,878	594.2	12 / 40
070	7,000	2,878	596.2	275 / 43
076	7,605	2,878	597.0	50 / 138
080	8,000	2,878	597.6	85 / 45
083	8,317	2,699	598.4	90 / 35
089	8,941	2,699	600.1	53 / 53
090	8,987	2,699	600.6	53 / 53
095	9,500	2,339	601.0	35 / 30
100	10,000	2,339	604.7	30 / 16
105	10,500	2,339	606.2	22 / 23
110	11,000	2,339	607.4	31 / 17
115	11,500	2,339	609.0	17 / 67
120	12,000	2,339	610.1	10 / 12
126	12,584	2,339	614.8	62 / 61
134	13,400	2,339	616.3	21 / 58
140	14,000	2,339	617.9	42 / 15
145	14,500	2,339	619.4	15 / 194
150	15,000	2,218	620.0	103 / 88
155	15,500	2,218	620.8	20 / 207
162	16,190	2,218	622.2	64 / 74
168	16,845	2,218	623.6	15 / 229
175	17,500	2,218	624.7	35 / 158
180	18,000	2,218	625.8	84 / 79
185	18,500	2,218	626.8	17 / 149
190	19,000	2,218	627.7	247 / 43
194	19,447	2,218	627.8	57 / 15
197	19,678	2,218	629.4	25 / 27
197	19,732	2,218	630.3	25 / 27



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
201	20,112	2,218	631.0	188 / 120
208	20,788	1,693	631.7	106 / 146
<b>Gulf Creek</b>				
099	9,873	2,430	172.3 <sup>1</sup>	222 / 200
105	10,474	2,430	172.3 <sup>1</sup>	248 / 250
111	11,142	2,430	172.3 <sup>1</sup>	49 / 452
115	11,528	2,430	172.3 <sup>1</sup>	79 / 286
119	11,885	2,430	172.3 <sup>1</sup>	50 / 50
119	11,929	2,430	172.3 <sup>1</sup>	50 / 50
126	12,578	2,430	172.3 <sup>1</sup>	489 / 192
132	13,239	2,430	172.3 <sup>1</sup>	489 / 31
135	13,527	2,430	172.3 <sup>1</sup>	100 / 100
136	13,558	2,430	172.3 <sup>1</sup>	100 / 100
141	14,104	2,247	172.3 <sup>1</sup>	103 / 252
147	14,710	2,247	172.3 <sup>1</sup>	45 / 309
154	15,431	2,247	172.3 <sup>1</sup>	282 / 37
161	16,082	2,247	172.3	222 / 25
165	16,463	2,247	172.9	50 / 50
165	16,507	2,247	173.5	50 / 50
168	16,828	2,247	174.1	138 / 218
172	17,217	2,247	174.5	54 / 263
177	17,668	2,247	175.7	19 / 359
185	18,458	2,247	177.8	375 / 49
190	19,011	2,247	178.7	291 / 179
197	19,670	2,247	179.9	130 / 127
202	20,188	1,864	180.7	121 / 164
211	21,065	1,864	182.1	202 / 40
217	21,652	1,864	183.0	191 / 57
225	22,477	1,864	184.7	22 / 414
229	22,922	1,864	185.2	26 / 424
233	23,327	1,864	186.0	31 / 262
237	23,689	1,864	186.6	25 / 128
244	24,386	1,864	189.3	25 / 296
251	25,078	1,864	190.3	147 / 148
256	25,632	1,864	191.0	40 / 222
<b>Harlands Creek</b>				
117	117	4,180	331.4 <sup>1</sup>	16 / 27
005	500	4,180	331.4 <sup>1</sup>	22 / 31
010	1,000	4,180	331.4 <sup>1</sup>	23 / 47
015	1,522	4,180	331.4 <sup>1</sup>	40 / 35
020	2,000	4,180	334.0	70 / 47
024	2,370	4,180	335.9	80 / 80
024	2,410	4,180	336.0	80 / 80
026	2,622	4,180	336.2	35 / 50
030	3,000	4,180	338.6	113 / 22

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
035	3,500	4,180	340.7	87 / 21
040	3,995	4,180	343.8	29 / 50
045	4,500	4,180	347.3	37 / 37
050	5,000	4,180	350.6	26 / 103
055	5,500	4,047	352.4	147 / 23
060	6,000	4,047	353.8	115 / 24
065	6,500	4,047	355.3	142 / 60
071	7,063	4,047	356.4	43 / 108
077	7,681	4,047	357.8	314 / 63
081	8,101	4,047	358.5	285 / 44
089	8,862	4,047	360.0	30 / 360
095	9,500	4,047	361.9	32 / 68
100	10,000	4,047	364.7	33 / 39
105	10,500	4,047	366.6	18 / 70
110	11,000	3,918	367.8	119 / 80
115	11,500	3,918	368.3	53 / 52
120	12,000	3,918	369.0	248 / 45
126	12,582	3,918	369.1	21 / 56
130	13,000	3,918	370.6	24 / 109
135	13,500	3,918	372.1	93 / 50
140	14,000	3,918	373.3	24 / 86
145	14,533	3,918	374.4	86 / 106
149	14,939	3,918	375.2	328 / 38
155	15,500	3,780	376.6	34 / 278
162	16,171	3,780	377.8	109 / 53
169	16,851	3,780	381.8	20 / 41
174	17,408	3,780	387.1	17 / 107
175	17,545	3,780	387.8	41 / 40
176	17,620	3,780	390.4	41 / 40
179	17,869	3,780	390.7	48 / 86
185	18,500	3,780	392.6	29 / 58
190	19,000	3,780	394.5	72 / 25
196	19,557	3,604	396.0	52 / 72
200	20,000	3,604	397.2	59 / 62
204	20,435	3,604	398.1	22 / 72
210	21,000	3,604	399.8	30 / 70
215	21,500	3,604	401.0	38 / 74
220	22,000	3,604	401.8	58 / 48
224	22,430	3,604	402.6	38 / 140
225	22,470	3,604	403.2	38 / 140
231	23,149	3,424	403.4	400 / 35
235	23,500	3,424	403.5	470 / 50
240	24,000	3,424	403.5	40 / 75
244	24,385	3,424	404.1	55 / 45
244	24,424	3,424	404.7	55 / 45

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
250	25,000	3,424	405.5	139 / 23
255	25,500	3,424	406.1	23 / 103
259	25,933	3,307	407.0	20 / 105
267	26,656	3,307	408.3	153 / 158
274	27,431	3,307	409.3	48 / 93
280	28,000	3,307	410.8	45 / 77
282	28,170	3,307	411.2	45 / 45
282	28,210	3,307	411.7	45 / 45
285	28,500	3,307	412.5	242 / 33
290	29,000	3,307	413.0	92 / 136
295	29,500	3,307	413.6	100 / 61
300	30,000	3,307	414.6	140 / 38
305	30,500	3,307	415.5	20 / 99
310	31,000	3,307	417.8	297 / 34
315	31,500	3,307	418.4	40 / 129
320	32,000	3,307	419.3	94 / 90
325	32,500	3,148	420.2	268 / 30
331	33,126	3,148	420.8	224 / 41
335	33,500	3,148	421.1	85 / 65
341	34,135	3,148	422.1	21 / 165
345	34,500	3,148	422.8	311 / 33
350	35,000	3,148	423.2	122 / 37
355	35,500	3,148	424.1	36 / 84
359	35,939	2,962	425.0	32 / 135
364	36,411	2,683	425.5	152 / 87
365	36,544	2,683	425.5	30 / 30
367	36,717	2,683	426.6	33 / 33
369	36,916	2,683	426.8	101 / 207
370	36,957	2,683	427.8	101 / 207
374	37,428	2,683	427.9	276 / 94
374	37,428	2,683	427.9	276 / 94
380	38,008	2,642	428.0	145 / 264
385	38,502	2,642	428.2	77 / 204
389	38,937	2,642	428.6	122 / 52
394	39,413	2,642	429.5	45 / 86
399	39,883	2,642	430.6	42 / 80
404	40,390	2,418	431.5	28 / 183
409	40,881	2,418	432.0	37 / 158
414	41,358	1,784	432.7	85 / 89
420	41,996	1,784	433.8	107 / 91
425	42,533	1,245	435.2	109 / 26
431	43,148	1,245	438.2	44 / 56
438	43,819	1,245	442.0	31 / 95
444	44,368	1,245	443.5	209 / 16
448	44,835	1,245	444.6	70 / 109

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
<b>Harts Creek</b>				
005	475	1,508	356.8 <sup>1</sup>	21 / 38
010	1,000	1,508	360.9	28 / 29
015	1,500	1,508	364.2	96 / 15
020	2,020	1,508	367.7	50 / 60
024	2,397	1,508	371.2	50 / 70
031	3,132	1,508	376.6	45 / 20
036	3,592	1,508	378.6	40 / 90
040	4,042	1,508	379.8	24 / 86
046	4,592	1,508	384.8	17 / 148
051	5,092	1,508	386.7	22 / 255
056	5,551	1,508	389.8	44 / 60
060	6,015	1,508	393.6	7 / 107
066	6,592	1,508	395.0	91 / 135
072	7,167	1,333	396.3	65 / 69
076	7,592	1,333	398.2	38 / 72
081	8,092	1,333	400.6	11 / 139
086	8,592	1,333	402.6	118 / 44
<b>Herndon Creek</b>				
005	455	1,413	237.8 <sup>1</sup>	223 / 243
008	817	1,413	237.8 <sup>1</sup>	66 / 115
012	1,186	1,413	237.8 <sup>1</sup>	70 / 194
014	1,417	1,413	237.8 <sup>1</sup>	164 / 111
016	1,608	1,413	237.8 <sup>1</sup>	106 / 95
017	1,661	1,413	237.8 <sup>1</sup>	106 / 95
020	1,950	1,413	237.8 <sup>1</sup>	356 / 48
024	2,433	1,413	237.8 <sup>1</sup>	55 / 23
030	2,962	1,142	237.8 <sup>1</sup>	209 / 30
035	3,534	1,142	237.8 <sup>1</sup>	50 / 92
041	4,072	1,142	237.9	20 / 144
045	4,500	1,142	240.3	21 / 82
051	5,091	1,142	244.3	105 / 84
056	5,568	1,142	247.9	147 / 33
059	5,943	1,078	251.0	82 / 107
059	5,943	1,100	251.0	82 / 107
061	6,092	1,100	252.3	73 / 32
063	6,310	1,100	253.9	32 / 193
065	6,496	1,070	254.4	163 / 22
066	6,610	1,070	255.8	41 / 47
067	6,670	1,070	258.8	35 / 28
067	6,735	1,070	258.9	25 / 20
069	6,883	1,070	259.7	20 / 46
071	7,088	1,070	260.2	20 / 70
072	7,229	1,070	260.7	20 / 85
075	7,453	1,070	261.2	112 / 45

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
076	7,636	1,070	261.5	120 / 8
079	7,873	1,070	262.7	30 / 20
080	8,045	1,070	264.1	30 / 25
082	8,168	1,070	264.8	25 / 25
084	8,357	1,070	266.0	14 / 20
085	8,509	1,070	266.9	11 / 20
086	8,623	1,070	267.3	12 / 10
088	8,758	1,070	269.2	12 / 10
089	8,916	1,070	270.9	11 / 11
090	9,050	1,070	272.0	16 / 14
092	9,188	1,070	273.4	16 / 20
093	9,318	1,070	274.4	11 / 11
095	9,469	1,070	277.9	16 / 20
097	9,691	1,070	279.7	18 / 15
098	9,803	1,070	281.2	50 / 11
099	9,899	1,070	283.2	50 / 16
101	10,079	1,070	284.1	14 / 32
102	10,192	1,070	284.3	12 / 32
103	10,341	1,070	285.5	20 / 16
105	10,517	776	286.1	5 / 21
107	10,739	776	288.4	10 / 10
109	10,907	776	290.3	14 / 11
111	11,079	776	292.9	20 / 32
112	11,221	776	294.3	7 / 13
113	11,332	776	295.6	17 / 24
115	11,457	776	297.1	33 / 15
<b>Hill Creek</b>				
004	359	928	368.9 <sup>1</sup>	22 / 35
009	926	928	370.1	51 / 35
014	1,402	928	372.2	90 / 16
016	1,605	928	372.9	21 / 20
018	1,772	928	377.4	21 / 20
020	1,952	928	378.2	17 / 19
025	2,542	855	382.0	47 / 128
032	3,159	855	396.0	18 / 138
032	3,209	855	397.8	18 / 138
038	3,772	855	399.4	125 / 32
044	4,351	855	401.0	24 / 82
049	4,858	855	405.1	15 / 26
054	5,388	855	411.7	35 / 30
058	5,803	855	416.4	18 / 35
059	5,859	855	424.0	18 / 35
064	6,417	855	425.0	10 / 43
069	6,878	855	429.9	99 / 10
073	7,293	855	432.9	60 / 50

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
074	7,373	855	439.1	60 / 60
076	7,612	855	439.2	79 / 60
082	8,189	357	439.6	54 / 65
087	8,663	357	442.9	16 / 14
092	9,195	357	454.2	15 / 15
097	9,731	357	466.2	10 / 10
101	10,056	357	472.3	54 / 15
106	10,613	357	489.3	14 / 11
107	10,687	357	490.1	14 / 11
110	10,981	357	510.9	15 / 8
<b>Indian Creek (into Deep River)</b>				
204	20,431	2,630	249.7	124 / 43
210	21,037	2,073	251.8	24 / 17
215	21,475	2,073	255.8	18 / 82
220	21,967	2,073	260.0	48 / 17
224	22,395	2,073	262.9	87 / 35
229	22,889	2,073	266.2	17 / 45
232	23,205	2,073	268.4	44 / 42
234	23,388	2,073	269.2	20 / 53
236	23,563	2,073	270.2	37 / 32
237	23,673	2,073	271.5	37 / 32
244	24,354	2,073	273.1	24 / 24
247	24,749	2,073	276.2	23 / 23
253	25,278	2,073	280.4	20 / 23
257	25,715	2,073	283.4	76 / 19
264	26,399	2,073	287.8	36 / 20
268	26,820	2,073	292.1	17 / 37
271	27,077	2,073	294.8	44 / 23
273	27,327	1,802	298.5	15 / 15
276	27,632	1,802	303.3	28 / 27
282	28,216	1,802	307.6	38 / 27
288	28,837	1,802	311.5	27 / 40
292	29,236	1,802	314.8	26 / 46
295	29,539	1,802	317.4	55 / 38
300	29,964	1,802	320.3	86 / 16
304	30,374	1,802	322.6	24 / 85
312	31,154	1,802	325.9	55 / 16
317	31,740	1,802	328.4	51 / 37
320	32,019	1,802	329.8	21 / 20
321	32,069	1,802	331.4	21 / 20
326	32,616	1,802	333.9	43 / 34
330	33,018	1,802	335.6	81 / 31
<b>Kit Creek</b>				
002	170	3,105	238.4 <sup>1</sup>	20 / 1,242
005	500	3,105	238.4 <sup>1</sup>	20 / 1,335

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
010	1,000	3,105	238.4 <sup>1</sup>	20 / 940
020	2,000	3,105	238.4 <sup>1</sup>	256 / 1,020
027	2,720	3,105	238.4 <sup>1</sup>	95 / 999
032	3,201	3,105	238.4 <sup>1</sup>	404 / 685
035	3,500	3,105	238.4 <sup>1</sup>	307 / 470
040	4,000	3,105	238.4 <sup>1</sup>	20 / 241
045	4,500	3,039	238.9	196 / 182
050	5,000	3,039	239.7	213 / 517
060	6,000	3,039	240.6	20 / 200
065	6,500	3,039	241.4	55 / 316
070	7,000	3,039	241.7	220 / 20
075	7,471	2,861	242.3	417 / 384
080	8,000	2,861	242.5	610 / 500
085	8,500	2,861	242.9	756 / 503
088	8,808	2,861	243.0	520 / 649
<b>Lacy Creek</b>				
002	206	1,854	544.2 <sup>1</sup>	82 / 48
005	546	1,854	544.2 <sup>1</sup>	70 / 19
008	819	1,854	544.2 <sup>1</sup>	34 / 14
009	889	1,854	539.7	11 / 10
009	929	1,854	561.2	90 / 90
016	1,618	1,854	561.2	100 / 100
020	2,000	1,854	561.9	79 / 87
025	2,500	1,854	562.8	97 / 58
030	2,973	1,854	563.6	44 / 73
035	3,500	1,854	564.3	119 / 81
040	4,000	1,747	564.6	44 / 125
<b>Landrum Creek</b>				
003	316	4,456	336.9 <sup>1</sup>	25 / 20
010	1,000	4,456	336.9 <sup>1</sup>	30 / 25
015	1,500	4,456	339.5	18 / 58
020	2,000	4,456	341.8	23 / 108
025	2,500	4,456	343.3	83 / 65
029	2,889	4,456	343.9	101 / 57
035	3,500	4,456	345.0	154 / 36
040	4,000	4,456	345.6	96 / 56
048	4,821	4,456	347.2	30 / 198
055	5,500	4,456	349.8	23 / 60
061	6,066	4,397	355.1	43 / 59
065	6,500	4,018	358.4	193 / 32
070	7,000	4,018	360.2	23 / 296
075	7,545	4,018	362.1	52 / 44
080	8,000	4,018	365.9	51 / 32
085	8,500	4,018	368.7	18 / 81
091	9,080	4,018	370.6	80 / 56

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
095	9,529	4,018	371.6	64 / 64
100	10,000	4,018	372.6	102 / 19
105	10,500	4,018	374.0	71 / 97
110	11,000	4,018	375.4	37 / 80
115	11,500	4,018	378.0	18 / 72
118	11,770	4,018	380.0	140 / 50
118	11,810	4,018	380.4	140 / 50
120	12,000	3,941	380.8	25 / 117
125	12,500	3,941	382.8	23 / 171
130	12,966	3,941	384.8	77 / 77
135	13,500	3,941	386.9	89 / 45
140	14,000	3,941	388.3	39 / 51
145	14,500	3,941	390.6	49 / 140
150	15,000	3,941	392.1	123 / 39
155	15,500	3,941	393.8	20 / 152
160	16,000	3,941	396.2	176 / 32
165	16,456	3,941	398.0	218 / 38
170	17,000	3,941	400.2	39 / 43
175	17,500	3,941	402.3	59 / 34
180	18,000	3,941	403.6	92 / 87
185	18,500	3,941	404.4	144 / 148
190	19,000	3,941	404.9	99 / 181
195	19,500	3,771	405.6	20 / 92
200	20,000	3,771	406.7	42 / 80
205	20,545	3,771	408.3	36 / 74
210	21,000	3,771	410.3	15 / 130
215	21,500	3,771	410.9	44 / 400
224	22,403	3,593	411.4	50 / 382
230	23,000	3,593	411.9	146 / 124
235	23,500	3,377	412.4	161 / 35
240	24,000	3,377	414.2	30 / 140
243	24,347	3,377	415.2	228 / 35
244	24,386	3,377	415.2	228 / 35
253	25,258	3,377	417.9	52 / 40
260	26,000	3,377	422.9	41 / 153
265	26,500	3,377	427.3	69 / 26
269	26,932	3,377	433.4	40 / 40
273	27,309	3,377	439.2	40 / 50
279	27,891	3,377	443.5	25 / 60
285	28,500	3,377	446.2	20 / 48
290	29,000	3,377	451.5	46 / 65
295	29,500	3,377	453.3	55 / 61
300	30,000	3,377	454.6	43 / 75
304	30,385	3,377	455.5	152 / 62
309	30,895	1,864	456.0	110 / 97



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
315	31,500	1,864	456.6	20 / 94
320	31,974	1,864	458.9	50 / 53
320	32,027	1,864	458.8	50 / 53
325	32,500	1,864	460.4	215 / 41
331	33,077	1,864	461.4	250 / 30
335	33,500	1,864	463.1	154 / 33
340	34,000	1,864	466.5	58 / 109
345	34,500	1,864	467.8	230 / 23
350	35,000	1,864	468.8	226 / 59
355	35,458	1,864	470.3	151 / 126
360	36,000	1,635	472.4	260 / 22
367	36,657	1,635	474.7	222 / 17
375	37,500	1,635	477.3	136 / 97
380	38,000	1,635	478.8	18 / 125
385	38,500	1,635	481.0	169 / 13
390	39,000	1,635	483.6	57 / 117
395	39,500	1,635	485.8	338 / 42
398	39,811	1,635	487.0	186 / 50
404	40,420	1,328	490.2	91 / 160
410	41,000	1,328	493.1	30 / 75
413	41,296	1,328	496.1	37 / 40
414	41,371	1,328	496.6	37 / 40
416	41,642	1,328	498.9	32 / 180
418	41,841	1,328	500.3	65 / 40
<b>Landrum Creek Tributary</b>				
002	226	2,322	455.7 <sup>1</sup>	162 / 145
006	589	2,322	455.7 <sup>1</sup>	14 / 199
012	1,211	2,322	455.7 <sup>1</sup>	267 / 16
019	1,922	2,322	456.9	42 / 99
022	2,174	2,322	457.6	30 / 62
022	2,213	2,322	457.6	30 / 62
025	2,500	2,322	458.4	83 / 65
030	3,000	2,322	459.6	25 / 153
035	3,500	2,322	460.4	146 / 56
040	4,000	2,322	461.0	35 / 271
045	4,500	2,184	461.6	54 / 47
053	5,309	1,321	463.5	61 / 155
059	5,901	1,321	464.2	208 / 10
065	6,500	1,321	465.5	139 / 16
070	7,000	1,263	468.4	147 / 79
<b>Lick Creek</b>				
003	289	2,284	424.1 <sup>1</sup>	29 / 63
007	732	2,284	424.1 <sup>1</sup>	33 / 25
013	1,323	2,284	426.2	24 / 72
020	1,961	2,284	428.4	62 / 23

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
025	2,514	2,284	431.0	24 / 93
030	3,038	2,216	433.3	22 / 67
035	3,508	2,216	436.0	50 / 22
042	4,157	2,216	441.2	23 / 23
045	4,528	2,216	444.0	23 / 23
053	5,265	2,216	449.3	14 / 21
057	5,734	2,216	453.0	18 / 27
063	6,251	2,216	455.7	27 / 37
068	6,801	2,216	459.1	30 / 46
075	7,466	2,216	460.9	87 / 53
084	8,354	2,216	462.8	110 / 42
088	8,818	2,216	464.2	46 / 20
093	9,340	2,216	466.3	29 / 32
101	10,075	1,968	469.2	17 / 60
108	10,767	1,968	470.8	84 / 80
116	11,580	1,968	471.8	136 / 38
121	12,146	1,968	472.7	64 / 295
125	12,541	1,968	473.3	29 / 235
<b>Line Creek</b>				
001	72	1,210	250.0 <sup>1</sup>	46 / 50
001	130	1,210	250.0 <sup>1</sup>	41 / 54
002	167	1,210	250.0 <sup>1</sup>	52 / 43
002	213	1,210	250.0 <sup>1</sup>	63 / 50
003	257	1,210	250.0 <sup>1</sup>	99 / 17
003	312	1,210	250.0 <sup>1</sup>	27 / 17
006	574	1,210	250.0 <sup>1</sup>	169 / 165
009	878	1,210	250.0 <sup>1</sup>	138 / 128
016	1,606	1,210	250.0 <sup>1</sup>	129 / 350
018	1,838	1,210	250.0 <sup>1</sup>	58 / 92
019	1,930	1,210	250.0 <sup>1</sup>	100 / 51
020	2,012	1,210	250.0 <sup>1</sup>	132 / 21
022	2,171	1,210	250.0 <sup>1</sup>	298 / 20
030	3,034	1,210	250.0 <sup>1</sup>	139 / 147
040	3,987	1,210	250.0 <sup>1</sup>	105 / 20
047	4,742	1,210	250.0 <sup>1</sup>	34 / 20
051	5,138	1,210	250.0 <sup>1</sup>	71 / 16
057	5,658	1,210	250.0 <sup>1</sup>	24 / 49
060	6,027	1,210	251.5	20 / 40
064	6,443	672	254.9	34 / 20
069	6,869	672	256.6	20 / 23
073	7,336	672	260.9	20 / 20
078	7,752	672	267.0	20 / 20
081	8,101	672	270.7	20 / 20
<b>Little Brush Creek</b>				
130	13,000	4,429	453.9	80 / 26

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
136	13,576	4,429	454.8	38 / 20
143	14,317	4,287	456.4	84 / 20
150	15,000	4,287	457.7	44 / 19
155	15,500	4,287	458.8	37 / 49
160	16,034	4,287	459.6	65 / 19
165	16,500	4,287	460.2	53 / 19
170	17,000	4,287	460.9	24 / 48
176	17,639	4,287	462.0	24 / 81
180	18,000	4,287	462.3	24 / 57
184	18,372	4,287	462.8	22 / 25
186	18,561	4,287	463.4	44 / 24
186	18,601	4,287	463.6	44 / 24
192	19,171	4,287	464.3	27 / 62
195	19,500	4,287	464.7	49 / 46
200	20,000	4,287	465.2	66 / 58
215	21,500	4,133	467.3	20 / 115
220	22,000	3,799	468.0	57 / 37
224	22,422	3,799	468.8	53 / 81
229	22,857	3,799	469.2	37 / 88
236	23,601	2,955	470.5	158 / 43
245	24,456	2,955	471.1	29 / 56
251	25,083	2,955	472.1	23 / 51
255	25,500	2,955	472.7	47 / 23
260	26,000	2,908	473.6	318 / 61
266	26,612	2,908	473.8	44 / 87
270	27,000	2,908	474.3	134 / 60
275	27,500	2,908	474.9	74 / 23
279	27,912	2,908	476.4	98 / 37
285	28,500	2,698	477.4	188 / 156
290	29,000	2,698	477.8	137 / 22
295	29,500	2,698	479.2	16 / 63
299	29,873	2,698	480.7	20 / 86
302	30,199	2,698	481.7	40 / 29
302	30,239	2,698	482.2	40 / 29
305	30,500	2,698	482.8	21 / 43
310	31,000	2,698	485.2	25 / 48
316	31,648	2,698	487.0	321 / 14
321	32,060	2,698	487.4	156 / 19
325	32,500	2,698	488.5	53 / 97
330	33,000	2,698	489.8	57 / 42
335	33,500	2,698	491.4	77 / 49
339	33,921	2,698	492.7	46 / 52
346	34,631	2,698	495.0	142 / 17
350	35,000	2,698	496.0	137 / 67
355	35,488	2,698	497.1	85 / 57

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
360	35,982	2,698	498.5	73 / 159
365	36,500	2,532	499.5	68 / 69
370	37,000	2,532	500.8	200 / 18
374	37,387	2,532	501.8	212 / 59
378	37,810	2,303	502.7	119 / 80
384	38,412	2,091	504.3	28 / 283
393	39,314	2,091	506.8	167 / 51
401	40,071	2,091	508.8	73 / 131
405	40,500	2,050	509.4	44 / 26
411	41,064	1,786	512.0	66 / 102
415	41,500	1,786	512.9	29 / 32
420	42,000	1,786	515.5	10 / 64
423	42,261	1,786	516.3	26 / 84
427	42,695	1,786	517.0	66 / 26
427	42,739	1,786	518.1	66 / 26
430	43,000	1,786	518.4	67 / 48
435	43,500	1,786	519.6	99 / 58
440	44,000	1,786	521.1	36 / 144
445	44,500	1,786	522.2	127 / 113
450	45,000	1,786	523.4	210 / 18
455	45,500	1,650	525.3	192 / 38
460	46,000	1,650	526.6	208 / 139
464	46,383	1,650	527.4	175 / 91
470	47,000	1,650	529.4	150 / 9
475	47,500	1,650	532.8	10 / 144
480	48,000	1,650	534.4	212 / 159
485	48,500	1,650	534.8	245 / 28
492	49,192	1,650	536.2	151 / 15
496	49,552	1,650	537.4	123 / 30
499	49,928	1,352	538.7	56 / 69
505	50,467	1,352	540.6	49 / 127
509	50,922	1,352	541.9	96 / 62
514	51,382	1,352	543.0	117 / 31
<b>Little Indian Creek</b>				
120	11,956	3,043	251.8	64 / 65
125	12,506	3,043	255.2	48 / 20
128	12,831	3,043	258.0	20 / 78
131	13,109	3,043	259.7	140 / 144
138	13,773	3,043	261.3	30 / 56
142	14,195	3,043	263.5	45 / 20
147	14,734	3,043	266.2	140 / 20
152	15,167	3,043	268.3	60 / 22
155	15,525	3,043	272.4	95 / 20
159	15,895	2,935	274.0	24 / 20
162	16,207	2,935	276.4	30 / 42

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
168	16,807	2,935	278.1	80 / 35
176	17,554	2,935	279.6	46 / 61
184	18,362	2,935	281.6	45 / 113
187	18,676	2,935	282.2	84 / 20
192	19,197	2,935	283.8	137 / 84
195	19,465	2,935	284.2	131 / 80
198	19,801	2,935	284.7	100 / 83
199	19,851	2,935	284.8	100 / 83
202	20,213	2,935	285.6	19 / 205
206	20,615	2,935	286.7	24 / 175
210	21,038	2,935	287.9	149 / 93
216	21,626	2,759	290.4	19 / 57
221	22,092	2,759	293.2	135 / 220
225	22,494	2,759	293.8	19 / 265
229	22,851	2,759	294.6	19 / 143
235	23,528	2,759	297.7	144 / 43
240	24,011	2,759	299.1	30 / 30
241	24,072	2,759	301.2	30 / 30
245	24,530	2,759	303.0	161 / 54
257	25,689	2,546	305.8	148 / 36
261	26,092	2,546	307.1	45 / 120
266	26,639	2,546	309.1	21 / 86
272	27,170	2,546	311.2	123 / 20
278	27,807	2,546	314.1	18 / 158
284	28,376	2,546	318.1	59 / 38
289	28,947	2,546	321.2	103 / 68
296	29,612	1,718	323.6	92 / 16
303	30,269	1,718	326.7	20 / 30
307	30,717	1,718	330.0	15 / 49
314	31,389	1,718	336.5	152 / 15
320	32,024	1,718	340.3	38 / 44
323	32,320	1,718	342.3	24 / 24
324	32,398	1,718	346.2	24 / 24
328	32,820	1,718	346.7	27 / 78
333	33,286	1,718	349.4	86 / 15
337	33,661	1,718	351.9	37 / 46
341	34,093	1,488	356.3	23 / 63
347	34,714	1,488	363.4	44 / 29
354	35,370	1,488	367.3	115 / 48
359	35,928	1,488	369.3	26 / 73
364	36,426	1,488	371.6	53 / 35
367	36,715	1,488	373.0	20 / 20
368	36,803	1,488	375.8	20 / 20
371	37,061	1,488	376.9	100 / 24
375	37,548	1,488	377.6	110 / 18

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
<b>Long Branch</b>				
005	498	1,267	448.6 <sup>1</sup>	31 / 32
009	911	1,267	450.0	23 / 64
011	1,054	1,267	450.7	37 / 44
011	1,093	1,267	452.5	37 / 44
017	1,659	1,267	457.7	52 / 8
021	2,101	1,267	463.3	20 / 25
026	2,640	1,267	468.3	18 / 49
032	3,210	1,267	470.7	22 / 38
038	3,793	1,163	473.0	12 / 77
044	4,429	1,163	475.4	111 / 12
052	5,248	1,163	476.9	18 / 19
053	5,300	1,163	479.9	18 / 19
057	5,728	1,163	480.5	35 / 131
062	6,218	1,163	481.3	69 / 35
071	7,134	1,163	483.3	20 / 76
078	7,767	1,163	484.8	20 / 78
084	8,418	1,163	486.4	39 / 78
091	9,092	1,163	487.8	131 / 52
098	9,830	1,163	489.7	174 / 17
106	10,645	1,163	491.3	135 / 50
111	11,063	1,163	491.9	94 / 97
116	11,627	1,163	492.9	147 / 17
122	12,215	788	494.6	46 / 115
133	13,343	788	497.1	70 / 14
<b>Loves Creek Tributary 2</b>				
002	199	616	586.7 <sup>1</sup>	40 / 20
005	454	616	586.7 <sup>1</sup>	35 / 35
013	1,349	616	593.8	35 / 35
015	1,456	616	595.1	80 / 80
018	1,827	616	599.1	40 / 20
019	1,897	616	600.6	8 / 8
020	2,029	616	603.3	8 / 80
025	2,456	616	605.5	152 / 8
030	2,956	616	610.0	81 / 7
035	3,456	616	615.5	40 / 25
040	3,956	370	622.1	8 / 41
045	4,456	370	630.5	21 / 7
050	4,956	370	642.1	15 / 20
055	5,456	370	652.8	8 / 39
060	5,974	370	666.0	14 / 8
<b>Loves Creek Tributary 3</b>				
000	5	554	592.6 <sup>1</sup>	20 / 9
000	5	554	592.6 <sup>1</sup>	55 / 20
001	63	554	593.7	50 / 20
004	395	554	595.3	6 / 17

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
004	445	554	597.3	6 / 10
010	1,019	554	601.8	23 / 50
012	1,242	554	602.8	11 / 10
013	1,295	554	606.7	92 / 18
016	1,570	554	607.3	31 / 7
018	1,800	554	610.8	53 / 30
020	2,043	554	611.7	15 / 34
021	2,113	554	613.6	75 / 75
023	2,318	554	617.5	20 / 30
024	2,378	554	618.4	20 / 30
026	2,572	554	621.5	34 / 8
030	2,960	554	630.3	12 / 15
032	3,164	554	638.5	10 / 6
032	3,221	554	647.4	35 / 50
036	3,575	554	647.7	8 / 26
<b>Meadow Branch</b>				
003	274	1,541	380.7 <sup>1</sup>	24 / 170
007	740	1,541	380.7 <sup>1</sup>	78 / 124
013	1,327	1,541	382.3	200 / 33
018	1,830	1,374	383.6	21 / 161
024	2,396	1,374	385.2	14 / 60
025	2,456	1,374	388.6	14 / 60
028	2,770	1,374	388.8	188 / 86
<b>Meadow Creek</b>				
002	185	2,194	436.8	36 / 26
005	500	2,194	441.8	30 / 26
010	1,000	2,194	448.4	52 / 40
017	1,651	2,194	454.4	36 / 33
020	2,000	2,194	458.5	39 / 39
025	2,500	2,194	461.9	68 / 44
030	3,000	2,194	464.8	105 / 30
035	3,500	2,194	467.0	70 / 102
039	3,906	2,194	468.5	47 / 44
039	3,946	2,194	469.3	47 / 44
041	4,134	2,194	470.6	95 / 39
045	4,500	2,006	471.8	30 / 171
050	5,000	2,006	473.9	138 / 105
055	5,500	2,006	476.0	112 / 110
060	6,000	2,006	478.8	33 / 68
065	6,500	2,006	481.0	82 / 108
070	7,000	2,006	482.8	35 / 26
075	7,500	2,006	487.3	45 / 161
080	8,000	2,006	489.6	73 / 15
087	8,691	2,006	495.3	63 / 67
094	9,396	2,006	498.5	172 / 17

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
100	10,000	2,006	500.4	59 / 104
105	10,500	2,006	502.8	23 / 91
111	11,096	2,006	505.6	32 / 183
<b>Mill Branch</b>				
054	5,389	925	237.8 <sup>1</sup>	33 / 122
059	5,943	925	237.8 <sup>1</sup>	62 / 54
064	6,403	925	237.8 <sup>1</sup>	40 / 67
070	7,000	925	240.2	76 / 72
075	7,500	925	242.5	90 / 19
079	7,934	925	244.3	65 / 27
<b>Morgan Creek</b>				
160	16,000	11,700	237.8 <sup>1</sup>	1,050 / 988
176	17,601	11,700	237.8 <sup>1</sup>	1,070 / 537
192	19,194	11,700	237.8 <sup>1</sup>	19 / 1,658
205	20,500	11,700	237.8 <sup>1</sup>	655 / 672
222	22,210	11,700	237.8 <sup>1</sup>	670 / 662
235	23,500	11,700	237.8 <sup>1</sup>	664 / 636
241	24,146	11,700	237.8 <sup>1</sup>	218 / 220
242	24,198	11,700	237.8 <sup>1</sup>	218 / 220
250	25,000	11,700	237.8 <sup>1</sup>	713 / 449
260	26,000	11,700	237.8 <sup>1</sup>	735 / 47
<b>Mud Lick Creek</b>				
002	184	2,845	544.6 <sup>1</sup>	233 / 95
006	614	2,845	544.6 <sup>1</sup>	302 / 107
010	1,000	2,845	544.6 <sup>1</sup>	89 / 251
015	1,528	2,845	544.6 <sup>1</sup>	51 / 114
019	1,904	2,845	544.6 <sup>1</sup>	34 / 64
025	2,467	2,729	544.6 <sup>1</sup>	169 / 35
030	3,000	2,729	545.9	30 / 83
031	3,141	2,729	546.2	40 / 53
032	3,181	2,729	547.0	40 / 53
035	3,500	2,729	548.3	66 / 40
039	3,937	2,729	549.4	123 / 24
045	4,500	2,729	551.0	43 / 77
049	4,945	2,729	552.2	98 / 35
055	5,466	2,729	553.5	283 / 20
059	5,935	2,729	555.1	32 / 63
065	6,480	2,729	556.6	14 / 93
070	7,000	2,729	557.4	21 / 96
076	7,556	2,729	559.3	71 / 15
079	7,936	2,729	560.4	57 / 34
085	8,496	2,729	561.6	40 / 100
085	8,536	2,729	561.6	40 / 100
090	9,000	1,969	562.1	20 / 30
095	9,496	1,969	565.8	36 / 14
100	10,000	1,969	574.8	58 / 13



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
106	10,622	1,969	578.9	30 / 78
110	11,000	1,969	579.7	15 / 140
115	11,523	1,969	580.5	65 / 220
120	12,000	1,969	581.2	57 / 164
125	12,506	1,969	582.0	23 / 120
129	12,875	1,969	583.0	17 / 85
135	13,488	1,722	584.4	203 / 11
139	13,864	1,722	585.0	11 / 123
146	14,628	1,722	586.3	12 / 147
150	15,000	1,722	586.9	25 / 164
154	15,364	1,722	587.8	50 / 50
158	15,755	1,722	589.4	24 / 24
158	15,809	1,722	590.5	24 / 24
160	16,029	1,722	590.8	130 / 9
166	16,622	1,595	592.1	21 / 107
170	17,000	1,595	592.4	55 / 185
176	17,610	1,595	592.8	16 / 158
180	18,000	1,595	593.8	41 / 75
186	18,605	1,595	595.8	163 / 35
191	19,066	1,317	596.8	26 / 64
<b>Nancy Branch</b>				
005	500	1,173	237.8 <sup>1</sup>	281 / 73
010	1,000	1,173	237.8 <sup>1</sup>	217 / 179
016	1,579	1,100	237.8 <sup>1</sup>	51 / 393
021	2,131	1,100	239.0	197 / 78
021	2,131	1,390	239.0	197 / 78
024	2,445	1,390	239.9	50 / 187
027	2,690	1,320	240.5	40 / 261
031	3,147	1,320	245.2	45 / 65
034	3,436	1,320	246.4	87 / 225
038	3,791	1,290	246.5	36 / 118
041	4,073	1,290	246.7	14 / 262
045	4,527	1,290	247.0	14 / 267
050	5,007	1,290	247.8	90 / 30
056	5,551	1,120	250.9	137 / 14
060	6,018	1,120	251.8	63 / 14
063	6,346	1,120	252.8	106 / 75
067	6,733	1,040	253.6	101 / 48
070	7,050	1,040	254.4	24 / 20
072	7,174	1,040	257.1	24 / 24
075	7,457	1,040	257.5	155 / 10
<b>New Hope River Tributary 1</b>				
040	4,000	154	237.8 <sup>1</sup>	30 / 7
045	4,500	154	237.8 <sup>1</sup>	8 / 8
050	5,000	154	237.8 <sup>1</sup>	7 / 8

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
055	5,500	154	247.0	7 / 13
<b>North Prong Rocky River</b>				
005	500	3,676	587.2 <sup>1</sup>	179 / 142
010	1,000	3,676	587.2 <sup>1</sup>	130 / 91
015	1,500	3,676	587.2 <sup>1</sup>	185 / 51
020	2,000	3,676	587.2 <sup>1</sup>	127 / 87
025	2,500	3,676	587.2 <sup>1</sup>	50 / 51
030	3,000	3,676	587.2 <sup>1</sup>	57 / 135
035	3,500	3,676	587.2 <sup>1</sup>	34 / 71
040	3,970	3,676	588.5	45 / 53
045	4,548	3,676	590.7	18 / 69
051	5,050	3,676	592.8	66 / 21
056	5,636	3,676	594.8	25 / 23
065	6,454	3,676	597.6	55 / 25
070	7,000	3,545	598.9	50 / 27
075	7,500	3,545	600.1	20 / 69
083	8,310	3,545	601.9	94 / 34
090	9,000	3,545	603.5	31 / 29
095	9,500	3,545	606.3	193 / 25
100	10,000	3,545	607.1	30 / 308
105	10,500	3,545	607.4	23 / 141
112	11,185	3,545	608.5	43 / 39
119	11,921	3,545	610.0	56 / 35
125	12,500	3,363	610.9	23 / 72
130	13,000	3,363	612.1	63 / 24
135	13,500	3,174	613.2	140 / 21
140	14,000	3,174	613.8	68 / 16
143	14,297	3,174	614.6	45 / 45
143	14,341	3,174	614.7	45 / 45
145	14,500	3,174	614.8	159 / 34
150	15,000	3,174	617.1	18 / 18
155	15,500	3,174	620.3	84 / 94
160	16,000	3,174	620.9	73 / 80
165	16,500	3,174	621.4	198 / 19
170	17,005	3,061	621.8	56 / 365
175	17,500	3,061	622.1	25 / 379
180	18,000	3,061	622.6	85 / 83
185	18,500	3,061	623.3	25 / 45
190	19,004	3,061	625.0	28 / 25
195	19,500	3,061	627.0	37 / 26
200	20,000	3,061	628.4	23 / 39
207	20,661	3,061	630.9	97 / 34
211	21,058	3,061	632.1	56 / 28
213	21,350	3,061	632.9	50 / 50
214	21,400	3,061	633.4	50 / 50

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
218	21,779	3,061	634.3	156 / 153
227	22,674	2,862	634.8	250 / 25
231	23,111	2,862	635.1	147 / 66
235	23,500	2,862	635.4	105 / 35
240	24,000	2,862	636.4	92 / 75
245	24,500	2,862	637.1	79 / 27
250	25,000	2,862	638.2	64 / 91
255	25,500	2,862	639.0	57 / 105
260	26,000	2,651	639.8	24 / 197
266	26,644	2,651	640.5	22 / 99
273	27,317	2,651	642.1	52 / 21
280	28,000	2,651	644.2	122 / 14
285	28,500	2,651	645.1	26 / 194
290	29,000	2,651	645.6	60 / 92
293	29,323	2,651	645.8	50 / 50
294	29,369	2,651	646.9	50 / 50
296	29,550	2,651	647.4	123 / 212
301	30,053	2,651	647.6	46 / 90
<b>Northeast Creek</b>				
001	149	10,600	237.8 <sup>1</sup>	382 / 993
015	1,549	10,600	237.8 <sup>1</sup>	744 / 790
025	2,512	10,600	237.8 <sup>1</sup>	1,008 / 444
039	3,929	10,000	237.8 <sup>1</sup>	624 / 463
054	5,409	10,000	237.8 <sup>1</sup>	234 / 1,125
066	6,638	10,000	237.8 <sup>1</sup>	473 / 674
078	7,775	10,000	237.8 <sup>1</sup>	314 / 792
089	8,917	10,000	237.8 <sup>1</sup>	525 / 500
099	9,872	10,000	237.8 <sup>1</sup>	353 / 883
111	11,124	10,000	237.8 <sup>1</sup>	427 / 664
124	12,435	9,940	237.8 <sup>1</sup>	113 / 125
125	12,486	9,940	237.8 <sup>1</sup>	113 / 125
141	14,133	9,880	237.8 <sup>1</sup>	700 / 150
151	15,142	9,880	237.8 <sup>1</sup>	1,400 / 500
163	16,289	9,880	237.8 <sup>1</sup>	1,300 / 700
180	17,990	9,880	237.8 <sup>1</sup>	170 / 167
180	18,041	9,880	238.2	170 / 167
195	19,512	9,060	238.9	1,500 / 700
209	20,875	9,060	239.0	1,100 / 1,000
216	21,574	9,060	239.0	957 / 30
225	22,518	9,060	239.3	462 / 568
233	23,320	9,060	239.5	850 / 287
241	24,074	8,840	239.6	1,050 / 378
<b>Overcup Creek</b>				
120	11,966	696	237.8 <sup>1</sup>	70 / 50
125	12,500	696	237.8 <sup>1</sup>	35 / 55

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
130	13,000	696	237.8 <sup>1</sup>	14 / 60
135	13,500	696	237.8 <sup>1</sup>	17 / 80
141	14,051	696	237.8 <sup>1</sup>	30 / 50
146	14,636	696	237.8 <sup>1</sup>	16 / 45
150	15,033	696	237.8 <sup>1</sup>	40 / 41
155	15,500	696	237.8 <sup>1</sup>	50 / 30
159	15,891	696	237.8 <sup>1</sup>	30 / 22
165	16,515	696	240.0	10 / 50
170	17,000	696	242.6	25 / 12
174	17,446	696	245.7	10 / 15
180	18,000	435	252.8	5 / 4
<b>Overcup Creek Tributary</b>				
005	500	755	237.8 <sup>1</sup>	108 / 80
010	1,000	755	237.8 <sup>1</sup>	8 / 179
013	1,345	755	237.8 <sup>1</sup>	22 / 46
014	1,405	755	237.8 <sup>1</sup>	22 / 46
019	1,867	755	237.8 <sup>1</sup>	75 / 70
025	2,500	755	237.8 <sup>1</sup>	93 / 6
030	3,000	755	237.8 <sup>1</sup>	26 / 123
035	3,519	755	237.8 <sup>1</sup>	32 / 78
041	4,098	755	237.9	6 / 149
046	4,570	755	240.8	93 / 8
052	5,199	755	245.2	78 / 27
<b>Parkers Creek</b>				
135	13,500	1,121	237.8 <sup>1</sup>	376 / 11
140	14,000	1,121	237.8 <sup>1</sup>	204 / 153
145	14,500	1,121	237.8 <sup>1</sup>	121 / 14
150	15,000	1,121	237.8 <sup>1</sup>	105 / 13
155	15,500	1,121	237.8 <sup>1</sup>	23 / 62
160	16,000	1,121	240.9	45 / 25
164	16,429	1,121	246.1	13 / 11
166	16,585	1,121	259.4	30 / 30
170	17,000	1,121	259.1	35 / 35
175	17,500	1,121	268.1	30 / 10
180	18,000	1,121	277.1	10 / 20
185	18,500	1,121	286.9	36 / 8
<b>Persimmons Nursery Branch</b>				
004	419	1,320	448.2 <sup>1</sup>	125 / 59
009	949	1,320	448.2 <sup>1</sup>	8 / 137
013	1,289	1,320	448.2 <sup>1</sup>	16 / 190
014	1,389	1,320	448.2 <sup>1</sup>	16 / 190
019	1,930	1,320	450.4	8 / 193
<b>Pokeberry Creek</b>				
004	359	3,661	302.7 <sup>1</sup>	28 / 53
008	794	3,661	302.7 <sup>1</sup>	100 / 230
014	1,450	3,661	302.7 <sup>1</sup>	73 / 55

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
020	1,959	3,529	302.7	162 / 20
025	2,524	3,529	305.6	132 / 168
032	3,175	3,529	308.4	102 / 49
037	3,696	3,529	311.1	208 / 142
043	4,322	3,529	313.8	145 / 126
048	4,799	3,437	316.8	145 / 108
056	5,582	3,437	321.2	90 / 147
061	6,117	3,437	324.3	55 / 51
062	6,164	3,437	326.0	55 / 51
065	6,508	3,437	328.4	300 / 92
070	7,024	3,437	329.3	215 / 26
076	7,568	3,437	332.3	45 / 106
080	8,004	3,437	334.0	199 / 22
085	8,474	3,437	335.1	35 / 64
092	9,228	3,437	338.7	90 / 38
101	10,109	3,437	340.9	46 / 64
102	10,156	3,437	342.8	46 / 64
106	10,638	3,437	343.1	41 / 114
114	11,368	3,437	345.5	40 / 22
<b>Reedy Fork</b>				
024	2,377	1,038	499.2	45 / 32
030	3,000	1,038	502.1	63 / 40
034	3,365	1,038	503.2	59 / 50
038	3,793	1,038	504.2	78 / 32
044	4,403	1,038	505.8	52 / 34
050	5,000	1,038	508.5	41 / 25
054	5,407	1,038	510.2	32 / 70
059	5,878	1,038	511.6	21 / 98
059	5,948	1,038	514.9	21 / 98
064	6,393	832	515.0	105 / 33
067	6,727	832	516.3	83 / 14
068	6,797	832	525.9	83 / 24
072	7,175	832	526.1	73 / 38
079	7,936	832	526.6	55 / 36
<b>Robeson Creek Tributary 1</b>				
003	293	1,193	296.8 <sup>1</sup>	27 / 40
010	1,029	1,141	299.2	12 / 12
011	1,129	1,141	302.5	12 / 12
015	1,475	1,141	308.0	19 / 23
020	1,988	1,141	313.7	37 / 35
026	2,565	1,141	318.0	25 / 11
032	3,172	1,141	327.7	22 / 31
034	3,448	1,141	331.0	33 / 10
040	3,958	1,141	335.5	18 / 17
041	4,058	1,141	338.8	18 / 20

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
043	4,308	1,141	342.2	55 / 21
044	4,420	1,141	343.8	50 / 30
045	4,520	1,141	345.2	50 / 30
048	4,838	1,141	346.2	12 / 78
051	5,069	1,141	347.2	15 / 15
052	5,169	1,141	348.8	15 / 15
056	5,573	555	350.7	4 / 8
060	6,050	555	357.8	146 / 17
066	6,639	555	365.5	60 / 54
073	7,277	555	373.0	80 / 15
078	7,768	555	379.4	4 / 15
079	7,903	555	381.4	10 / 9
082	8,189	555	383.1	10 / 9
084	8,353	555	390.8	35 / 13
087	8,709	289	395.7	22 / 12
092	9,180	289	404.2	65 / 10
093	9,328	289	406.5	9 / 9
094	9,377	289	407.9	25 / 19
098	9,827	289	420.3	25 / 10
103	10,300	289	437.2	25 / 15
107	10,688	289	456.4	19 / 10
111	11,125	289	485.8	7 / 10
<b>Robeson Creek Tributary 2</b>				
002	158	755	349.2	41 / 6
008	827	755	354.4	145 / 12
014	1,354	755	359.1	74 / 15
019	1,876	755	364.7	27 / 15
019	1,937	755	366.3	27 / 15
024	2,364	755	371.8	66 / 15
024	2,414	755	372.6	66 / 15
036	3,556	755	384.0	85 / 64
042	4,232	755	393.6	30 / 25
049	4,854	755	405.8	27 / 16
054	5,437	378	416.7	24 / 11
061	6,147	378	427.8	37 / 32
065	6,505	378	434.8	21 / 8
071	7,135	378	446.9	26 / 12
078	7,848	378	468.6	15 / 20
082	8,201	378	477.8	8 / 10
083	8,251	378	482.7	15 / 21
087	8,725	378	501.5	5 / 8
<b>Robeson Creek Tributary 3A</b>				
001	135	919	395.2	240 / 3
003	283	716	396.0	50 / 45
004	401	716	396.5	25 / 35

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
006	580	716	399.1	25 / 30
007	665	716	400.8	20 / 20
007	729	716	402.7	40 / 30
008	808	716	403.0	40 / 18
008	847	427	403.4	40 / 20
009	877	427	403.5	40 / 20
009	933	427	404.8	40 / 20
010	959	427	404.9	50 / 20
010	989	427	405.1	30 / 20
010	1,017	427	405.4	30 / 20
011	1,073	427	408.1	35 / 25
011	1,095	427	408.1	30 / 50
011	1,119	427	408.1	20 / 25
012	1,150	427	408.1	20 / 25
012	1,195	427	410.5	25 / 30
012	1,228	427	410.5	30 / 55
013	1,276	427	410.5	30 / 55
013	1,319	427	410.6	30 / 30
014	1,366	427	410.6	23 / 23
015	1,494	427	411.5	10 / 10
016	1,634	427	413.6	10 / 10
018	1,792	427	415.6	10 / 10
020	1,950	358	417.6	10 / 10
021	2,058	358	418.6	16 / 16
021	2,118	358	423.1	20 / 20
022	2,163	358	423.1	10 / 10
022	2,228	358	423.1	10 / 10
023	2,289	358	423.2	14 / 14
024	2,373	358	429.6	22 / 25
024	2,390	358	429.7	50 / 35
024	2,428	358	429.7	75 / 35
025	2,466	358	429.7	100 / 45
026	2,578	358	429.9	75 / 100
027	2,654	358	429.9	48 / 48
028	2,788	358	430.0	25 / 25
<b>Robeson Creek Tributary 4</b>				
002	153	1,916	376.8	130 / 50
005	471	1,916	377.6	130 / 17
012	1,169	1,916	380.8	28 / 23
020	1,983	1,916	383.3	269 / 54
028	2,803	1,916	384.4	284 / 39
034	3,420	1,916	385.7	32 / 119
040	3,982	1,916	387.4	225 / 13
045	4,535	1,916	388.9	340 / 17
051	5,145	1,916	390.4	228 / 91

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
057	5,709	1,175	391.4	177 / 159
063	6,333	1,175	392.2	114 / 135
068	6,802	1,175	393.3	12 / 12
069	6,862	1,175	395.0	12 / 12
071	7,117	1,175	396.0	13 / 167
073	7,313	1,175	397.0	112 / 123
074	7,351	1,175	399.7	112 / 123
077	7,734	1,175	400.0	13 / 175
084	8,387	1,175	401.8	73 / 29
090	9,010	1,175	405.9	3 / 138
095	9,547	1,175	408.4	17 / 25
100	9,984	1,175	414.2	42 / 21
105	10,465	1,175	416.8	17 / 28
110	11,012	1,175	419.1	58 / 66
119	11,939	1,175	421.6	170 / 33
120	12,047	1,175	421.7	20 / 20
122	12,223	1,175	423.7	20 / 20
129	12,904	1,175	425.6	45 / 80
132	13,229	1,175	428.1	60 / 70
133	13,267	1,175	430.0	60 / 70
135	13,533	1,175	430.3	45 / 67
143	14,319	877	434.9	57 / 22
148	14,837	877	439.3	74 / 35
153	15,339	877	441.5	10 / 107
163	16,343	877	445.9	108 / 24
169	16,923	877	448.1	89 / 42
174	17,354	877	450.5	73 / 5
183	18,294	393	457.0	26 / 77
188	18,824	393	459.7	34 / 32
195	19,463	393	465.2	62 / 5
201	20,089	393	471.4	0 / 34
206	20,597	393	475.7	24 / 35
210	21,034	393	478.8	6 / 30
212	21,194	393	482.5	30 / 40
213	21,274	393	485.8	30 / 40
216	21,620	393	492.3	30 / 79
217	21,696	393	493.5	30 / 79
220	21,995	393	496.6	5 / 5
<b>Robeson Creek Tributary 5</b>				
006	586	1,096	391.4	76 / 44
011	1,096	1,096	394.9	27 / 79
019	1,892	1,096	398.8	31 / 86
026	2,613	1,096	401.4	79 / 7
031	3,064	1,096	403.2	70 / 22
039	3,886	1,096	406.7	20 / 20



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
040	3,956	1,096	410.5	20 / 20
050	4,964	1,096	411.8	100 / 18
056	5,583	1,096	414.4	25 / 222
063	6,308	1,096	416.3	86 / 38
068	6,802	1,096	417.4	16 / 15
069	6,862	1,096	418.9	16 / 15
076	7,589	1,096	420.8	62 / 18
082	8,170	1,096	424.0	70 / 40
082	8,210	1,096	424.3	70 / 40
084	8,427	746	424.9	166 / 23
091	9,098	746	427.9	30 / 62
098	9,756	746	431.0	12 / 12
100	10,037	746	433.2	12 / 12
106	10,639	746	435.1	60 / 28
115	11,478	746	437.9	159 / 6
121	12,057	746	439.3	34 / 31
125	12,486	746	441.6	9 / 79
125	12,524	746	442.2	9 / 79
132	13,171	746	444.6	24 / 68
137	13,702	746	446.7	10 / 43
142	14,220	386	449.1	33 / 43
148	14,848	386	451.4	24 / 14
155	15,472	386	455.7	36 / 27
161	16,120	386	459.4	0 / 37
169	16,906	386	464.3	52 / 10
179	17,907	386	470.8	8 / 12
<b>Rocky Branch (into Deep River)</b>				
005	509	2,036	204.2 <sup>1</sup>	47 / 51
012	1,199	2,036	205.1	18 / 48
015	1,460	2,036	207.4	26 / 15
020	2,023	2,036	214.1	24 / 35
027	2,702	2,036	222.4	79 / 12
<b>Rocky Branch (into Georges Creek)</b>				
006	554	1,796	232.1 <sup>1</sup>	163 / 207
011	1,147	1,796	232.1 <sup>1</sup>	102 / 321
017	1,662	1,796	232.4	276 / 45
019	1,892	1,796	233.0	306 / 43
020	1,962	1,796	234.9	306 / 43
025	2,526	1,636	235.2	132 / 237
032	3,151	1,636	235.8	6 / 307
040	4,028	1,636	237.3	191 / 297
046	4,561	1,636	238.7	225 / 94
047	4,706	1,636	239.8	69 / 47
049	4,852	1,636	242.1	29 / 21
051	5,150	1,636	245.3	29 / 27

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
052	5,224	1,636	245.6	27 / 14
054	5,371	1,636	246.9	73 / 24
056	5,635	1,636	247.7	129 / 177
057	5,699	1,636	247.7	14 / 153
058	5,798	1,333	248.4	14 / 153
065	6,470	1,333	249.1	49 / 171
070	6,986	1,333	250.5	4 / 194
076	7,580	1,333	252.4	4 / 150
086	8,631	990	255.3	75 / 134
091	9,070	990	256.3	102 / 83
<b>Rocky Ford Branch</b>				
005	528	1,600	237.8 <sup>1</sup>	52 / 700
010	1,000	1,600	237.8 <sup>1</sup>	10 / 269
015	1,500	1,600	237.8 <sup>1</sup>	39 / 118
020	2,000	1,600	237.8 <sup>1</sup>	256 / 35
027	2,695	1,600	237.8 <sup>1</sup>	210 / 10
030	3,000	1,600	237.8 <sup>1</sup>	340 / 19
035	3,542	1,600	237.8 <sup>1</sup>	78 / 121
036	3,615	1,600	237.8 <sup>1</sup>	20 / 21
037	3,723	1,600	237.8 <sup>1</sup>	20 / 21
039	3,944	1,600	237.8 <sup>1</sup>	62 / 234
044	4,355	1,470	237.8 <sup>1</sup>	9 / 266
050	5,000	1,470	237.8 <sup>1</sup>	10 / 207
055	5,500	1,470	238.6	61 / 109
060	6,000	1,470	239.7	18 / 132
065	6,500	1,470	241.3	65 / 102
070	7,000	1,470	242.7	16 / 72
075	7,500	1,470	244.3	30 / 58
<b>Rocky River</b>				
010	1,000	23,096	208.8 <sup>1</sup>	75 / 140
020	2,000	23,096	210.8	131 / 180
030	3,000	23,046	212.4	115 / 62
040	4,045	23,046	215.1	198 / 72
050	5,000	23,046	219.6	109 / 73
061	6,067	23,001	224.5	131 / 65
070	7,000	23,001	229.4	69 / 85
081	8,051	23,001	237.8	65 / 268
090	9,000	23,001	241.6	61 / 77
100	10,000	23,001	251.2	64 / 107
110	11,000	22,807	256.2	118 / 144
120	12,000	22,807	258.0	101 / 83
130	13,000	22,807	259.6	78 / 115
141	14,087	22,807	261.1	131 / 101
150	15,000	22,807	261.9	103 / 62
160	16,000	22,807	264.1	133 / 62

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
171	17,149	22,773	267.2	122 / 148
179	17,908	22,773	269.2	232 / 83
182	18,197	22,773	270.4	112 / 112
183	18,256	22,773	270.9	112 / 112
185	18,515	22,773	270.9	66 / 154
196	19,557	22,773	274.4	61 / 154
210	21,000	22,615	280.0	276 / 76
220	22,000	22,615	284.1	398 / 208
230	23,000	22,615	285.7	319 / 87
240	24,000	22,615	287.3	159 / 74
246	24,563	22,615	288.2	120 / 74
246	24,595	22,615	288.7	120 / 74
250	25,000	22,615	289.1	210 / 89
260	26,000	22,579	290.2	105 / 174
271	27,091	22,520	291.1	78 / 148
280	28,000	22,520	291.9	134 / 120
287	28,703	19,251	292.6	88 / 220
295	29,500	19,251	293.2	90 / 133
305	30,500	19,251	294.1	96 / 73
308	30,802	19,251	303.9	92 / 142
308	30,842	19,251	317.4	280 / 150
315	31,500	19,251	318.0	175 / 535
325	32,500	19,251	318.4	156 / 197
335	33,500	19,251	319.0	273 / 125
345	34,500	19,251	319.4	121 / 177
355	35,500	19,251	319.9	132 / 155
365	36,500	19,251	320.5	133 / 248
375	37,500	19,251	320.9	63 / 427
385	38,500	19,202	321.2	171 / 235
395	39,500	19,037	321.6	245 / 146
405	40,500	19,037	322.0	101 / 232
415	41,500	19,037	322.5	176 / 193
425	42,500	19,037	322.8	186 / 76
435	43,500	18,981	323.3	98 / 108
445	44,500	18,981	323.8	119 / 130
455	45,500	18,981	324.4	365 / 55
465	46,500	18,939	324.7	243 / 56
475	47,500	18,701	325.1	68 / 173
479	47,891	18,701	325.3	74 / 106
479	47,945	18,701	325.6	74 / 106
482	48,213	18,701	325.8	62 / 126
495	49,500	18,701	326.5	125 / 177
505	50,500	18,701	327.1	81 / 137
515	51,500	18,701	327.8	172 / 80
525	52,500	18,658	328.6	116 / 87

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
535	53,500	18,658	329.9	89 / 143
545	54,500	18,658	330.7	61 / 107
551	55,112	17,505	331.5	62 / 155
560	56,000	17,505	332.2	51 / 100
570	57,000	17,505	333.0	74 / 85
580	58,000	17,505	333.9	61 / 149
591	59,129	17,371	334.7	87 / 97
600	60,000	17,371	335.6	116 / 77
610	61,000	17,371	336.6	91 / 144
620	62,000	16,097	337.9	48 / 82
630	63,000	16,097	339.4	147 / 49
640	64,000	16,097	340.9	134 / 70
650	65,000	16,097	342.2	90 / 49
660	66,000	16,097	343.5	68 / 105
670	67,000	16,097	344.7	48 / 205
680	68,000	16,097	345.2	49 / 103
690	69,000	15,950	346.0	45 / 90
700	70,000	15,950	346.9	73 / 118
710	71,000	15,950	347.5	295 / 79
714	71,389	15,950	348.0	125 / 105
714	71,438	15,950	348.4	125 / 105
715	71,508	15,950	348.3	106 / 75
720	72,000	15,950	348.6	149 / 85
730	73,000	15,950	351.0	60 / 60
740	74,000	15,697	359.4	340 / 54
750	75,000	15,697	362.0	78 / 60
760	76,000	15,680	365.0	73 / 63
770	77,000	15,680	367.1	165 / 68
780	78,000	15,680	368.5	48 / 83
790	79,000	15,680	371.0	63 / 168
800	80,000	15,680	372.8	173 / 89
810	81,000	15,680	375.5	78 / 124
820	82,000	15,433	378.2	52 / 175
830	83,000	15,433	380.1	50 / 181
845	84,500	15,433	382.3	64 / 342
855	85,500	15,433	383.4	70 / 47
866	86,582	15,309	386.3	351 / 66
875	87,500	15,309	387.4	128 / 93
885	88,500	15,309	395.1	65 / 127
895	89,500	15,309	403.4	74 / 109
905	90,500	15,309	405.5	223 / 63
915	91,500	15,309	407.0	165 / 47
925	92,500	13,580	408.4	142 / 63
937	93,682	13,580	411.2	44 / 454
950	95,000	13,580	413.2	46 / 163

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
960	95,955	13,580	416.3	43 / 77
969	96,924	13,580	419.6	138 / 66
980	98,000	13,540	422.1	272 / 48
990	99,000	13,540	428.5	44 / 108
1000	100,000	13,540	433.7	43 / 78
1010	101,000	12,991	441.1	42 / 58
1020	102,000	12,957	448.0	95 / 86
1030	103,000	12,957	450.4	123 / 51
1041	104,087	12,874	453.5	42 / 57
1050	105,000	12,874	455.6	76 / 50
1061	106,051	12,856	457.4	74 / 88
1062	106,162	12,856	457.8	60 / 60
1062	106,202	12,856	458.1	60 / 60
1065	106,500	12,856	458.2	42 / 43
1075	107,500	12,856	459.5	42 / 45
1085	108,500	12,856	460.9	42 / 67
1095	109,500	12,856	462.2	42 / 73
1107	110,731	12,780	463.8	40 / 137
1115	111,500	12,696	464.6	42 / 70
1125	112,500	12,696	465.9	40 / 83
1136	113,563	12,696	467.6	69 / 108
1145	114,500	12,696	468.6	42 / 102
1155	115,500	12,503	470.2	84 / 117
1165	116,500	12,503	472.2	50 / 63
1175	117,500	12,475	476.2	50 / 63
1185	118,500	12,475	479.5	56 / 63
1195	119,500	12,475	482.0	84 / 82
1205	120,500	12,475	484.0	58 / 77
1215	121,500	11,517	485.8	75 / 42
1225	122,500	11,517	487.9	40 / 40
1235	123,500	11,434	491.2	40 / 52
1245	124,500	11,434	493.3	74 / 44
1255	125,500	11,391	495.7	73 / 225
1265	126,500	11,391	497.0	179 / 40
1275	127,531	11,391	498.5	66 / 48
1286	128,569	11,391	500.2	47 / 53
1475	147,500	9,272	522.7	36 / 76
1485	148,500	9,161	523.8	36 / 59
1495	149,500	9,161	525.4	44 / 36
1505	150,500	9,161	526.9	50 / 107
1515	151,500	9,161	527.9	59 / 37
1520	152,035	9,161	528.5	75 / 60
1523	152,295	9,161	529.4	215 / 85
1524	152,401	9,161	544.0	161 / 144
1524	152,441	9,161	544.0	140 / 158

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1525	152,460	9,161	544.0	148 / 188
1535	153,500	9,052	544.1	126 / 216
1545	154,500	9,052	544.1	182 / 151
1554	155,423	9,052	544.1	151 / 176
1565	156,500	9,052	544.2	93 / 208
1575	157,500	9,052	544.2	172 / 125
1585	158,459	9,052	544.3	105 / 479
1598	159,820	9,052	544.3	315 / 174
1600	160,040	9,052	544.3	293 / 96
1601	160,092	9,052	544.3	293 / 96
1605	160,500	9,052	544.5	207 / 116
1614	161,427	8,297	544.5	391 / 97
1626	162,616	8,297	544.6	170 / 219
1635	163,500	8,297	544.6	195 / 144
1645	164,500	8,297	544.6	159 / 61
1655	165,500	7,211	544.7	101 / 91
1665	166,500	7,211	544.7	78 / 50
1675	167,500	7,211	545.0	73 / 26
1685	168,500	7,211	549.1	31 / 40
1696	169,557	7,211	575.2	45 / 89
1696	169,597	7,211	579.4	67 / 133
1698	169,834	7,211	580.9	33 / 118
1710	171,000	7,211	583.9	92 / 136
1720	172,000	7,211	585.2	72 / 150
1730	172,951	7,211	586.0	125 / 228
1735	173,500	5,940	586.2	162 / 58
1746	174,554	5,940	587.0	96 / 120
1755	175,500	4,010	587.6	35 / 152
1764	176,429	4,010	588.1	171 / 157
1775	177,500	4,010	588.4	125 / 48
1777	177,706	4,010	588.6	145 / 44
1778	177,752	4,010	589.0	145 / 44
1780	177,968	3,974	589.0	111 / 36
1788	178,763	3,635	589.5	71 / 90
1800	180,000	3,635	590.7	17 / 213
1810	181,000	3,635	592.3	32 / 68
1820	182,000	3,635	594.2	95 / 35
1830	183,000	3,635	595.5	66 / 32
1840	184,000	3,635	597.3	128 / 38
1850	185,000	3,635	598.8	65 / 23
1860	186,000	3,635	601.0	60 / 17
1870	187,000	3,455	603.3	184 / 85
1885	188,455	3,455	604.6	37 / 502
1895	189,500	3,455	605.3	28 / 160
1907	190,679	3,455	607.6	271 / 16

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1914	191,352	3,455	609.0	159 / 25
1924	192,411	3,374	611.2	61 / 112
1934	193,447	2,891	612.6	33 / 68
1945	194,500	2,891	615.5	24 / 32
1955	195,500	2,891	619.5	39 / 28
1965	196,500	2,891	622.0	172 / 14
1975	197,468	2,612	623.4	34 / 82
1976	197,590	2,612	623.4	26 / 26
1976	197,646	2,612	624.0	26 / 26
1979	197,864	2,612	624.4	56 / 89
1985	198,500	2,612	625.1	40 / 116
1995	199,500	2,501	626.9	13 / 72
2006	200,553	2,501	631.0	44 / 29
2015	201,500	2,501	634.3	49 / 19
2025	202,500	2,501	638.4	61 / 17
2035	203,465	2,501	641.0	74 / 52
2036	203,600	2,501	641.2	29 / 30
2036	203,641	2,501	641.9	29 / 30
2040	204,000	2,501	642.2	43 / 32
2051	205,075	2,501	643.3	336 / 187
2058	205,809	2,501	644.0	399 / 42
<b>Rocky River Tributary 1</b>				
120	12,000	854	576.2	60 / 58
124	12,395	854	579.0	33 / 49
129	12,948	854	581.9	146 / 66
135	13,531	854	586.4	71 / 47
140	14,000	854	591.2	155 / 21
144	14,424	854	597.4	23 / 53
149	14,920	854	606.1	34 / 23
153	15,307	380	608.9	28 / 32
158	15,830	380	617.9	15 / 30
166	16,561	380	629.5	10 / 45
<b>Sandy Branch</b>				
002	233	1,866	409.5 <sup>1</sup>	31 / 66
009	881	1,866	409.5 <sup>1</sup>	160 / 89
015	1,479	1,866	409.5 <sup>1</sup>	14 / 28
021	2,085	1,866	410.5	14 / 177
025	2,500	1,866	411.6	31 / 20
030	3,000	1,866	416.2	60 / 40
035	3,500	1,866	417.7	14 / 89
040	4,000	1,774	418.5	189 / 53
045	4,500	1,774	419.0	60 / 100
051	5,126	1,774	419.8	6 / 275
055	5,500	1,774	419.6	7 / 30
060	6,000	1,774	423.0	21 / 250

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
063	6,289	1,774	423.3	38 / 38
063	6,330	1,774	423.8	38 / 38
065	6,500	1,774	424.5	36 / 41
<b>Shaddox Creek</b>				
006	556	4,223	176.5 <sup>1</sup>	40 / 170
012	1,188	4,223	176.5 <sup>1</sup>	83 / 77
020	2,034	4,223	176.5 <sup>1</sup>	97 / 204
021	2,076	4,223	176.5 <sup>1</sup>	97 / 204
029	2,868	4,048	176.5 <sup>1</sup>	582 / 62
032	3,159	4,048	176.5 <sup>1</sup>	730 / 121
034	3,363	4,048	176.5 <sup>1</sup>	1,081 / 124
034	3,405	4,048	176.5 <sup>1</sup>	1,081 / 124
045	4,523	4,048	176.5 <sup>1</sup>	866 / 343
053	5,311	3,987	176.5 <sup>1</sup>	685 / 580
060	5,970	3,987	176.5 <sup>1</sup>	963 / 552
063	6,265	3,987	176.5 <sup>1</sup>	709 / 881
076	7,648	3,987	176.5 <sup>1</sup>	19 / 1,228
087	8,715	3,858	176.5 <sup>1</sup>	924 / 672
093	9,305	3,858	176.5 <sup>1</sup>	461 / 868
101	10,110	3,858	176.5 <sup>1</sup>	568 / 721
112	11,207	3,858	176.5 <sup>1</sup>	809 / 361
122	12,192	3,858	176.5 <sup>1</sup>	451 / 531
131	13,132	3,858	176.5 <sup>1</sup>	393 / 875
142	14,241	3,858	176.5 <sup>1</sup>	307 / 605
154	15,371	2,650	176.5 <sup>1</sup>	562 / 121
162	16,221	2,650	176.5 <sup>1</sup>	939 / 17
170	16,973	2,650	176.5 <sup>1</sup>	333 / 232
178	17,777	2,607	180.0	573 / 416
186	18,556	2,607	180.0	484 / 304
196	19,612	2,607	180.1	85 / 453
201	20,069	2,607	180.2	36 / 578
213	21,257	2,607	180.6	31 / 378
220	21,997	2,607	181.2	23 / 487
225	22,508	2,607	181.4	207 / 281
235	23,481	2,607	181.8	43 / 143
240	23,958	2,607	182.7	40 / 500
251	25,133	2,607	183.8	91 / 379
257	25,677	2,607	184.3	82 / 412
265	26,484	2,396	185.1	44 / 215
273	27,281	2,396	186.6	149 / 217
287	28,664	1,694	188.1	249 / 112
292	29,248	1,694	188.5	153 / 391
300	29,987	1,694	189.7	56 / 376
307	30,663	1,694	190.5	38 / 241
313	31,320	1,694	192.2	16 / 192



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
321	32,125	1,694	194.2	36 / 288
329	32,887	1,694	195.4	55 / 144
337	33,694	1,694	196.4	204 / 49
341	34,136	1,694	197.0	189 / 34
349	34,882	1,694	198.5	24 / 250
360	35,973	1,441	200.1	28 / 267
367	36,727	1,441	201.3	33 / 190
375	37,489	1,441	203.1	197 / 21
383	38,261	1,441	204.9	203 / 19
394	39,350	1,441	207.4	248 / 44
401	40,150	1,441	209.0	28 / 299
411	41,090	1,441	211.0	110 / 35
420	41,959	1,293	212.8	129 / 56
424	42,433	1,270	213.5	101 / 133
424	42,433	1,293	213.5	101 / 133
427	42,733	1,270	213.6	35 / 265
430	42,978	1,270	213.8	12 / 200
430	43,049	1,270	217.5	50 / 150
432	43,190	1,270	217.6	54 / 147
434	43,441	1,270	217.6	31 / 37
437	43,746	1,130	218.0	57 / 110
440	43,987	1,130	218.2	113 / 59
441	44,060	1,130	219.0	113 / 59
442	44,232	1,130	219.0	65 / 158
445	44,457	1,130	219.1	68 / 33
448	44,770	1,130	219.5	65 / 115
451	45,056	1,130	219.9	101 / 43
454	45,368	1,130	220.5	107 / 36
458	45,804	992	221.5	84 / 20
462	46,231	992	222.9	82 / 76
465	46,546	758	223.6	12 / 74
469	46,890	758	224.9	30 / 18
472	47,170	758	226.7	55 / 36
474	47,444	758	228.3	27 / 19
477	47,716	758	230.4	80 / 19
479	47,947	758	231.2	18 / 62
482	48,209	758	232.9	30 / 72
485	48,497	758	235.1	31 / 70
487	48,684	758	236.0	38 / 23
<b>South Fork</b>				
310	31,019	3,140	525.5	142 / 23
315	31,544	3,140	526.2	48 / 211
325	32,509	3,140	527.0	203 / 69
332	33,163	3,140	527.6	77 / 48
335	33,518	3,140	528.4	50 / 18

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
341	34,117	3,140	530.2	63 / 23
346	34,647	2,590	531.1	132 / 60
352	35,157	2,590	531.6	78 / 120
357	35,730	2,590	532.4	18 / 50
364	36,379	2,590	536.3	62 / 23
371	37,138	2,590	538.5	41 / 45
377	37,658	2,590	539.7	33 / 92
384	38,377	2,590	540.9	100 / 24
390	39,028	2,590	542.3	92 / 20
393	39,316	2,590	543.4	143 / 81
394	39,364	2,420	543.7	143 / 81
399	39,903	2,110	543.9	121 / 102
406	40,580	2,110	544.8	115 / 44
412	41,211	2,110	547.0	104 / 38
417	41,739	2,070	549.6	18 / 130
421	42,066	2,070	550.4	100 / 60
<b>Stinking Creek</b>				
007	661	2,813	237.8 <sup>1</sup>	344 / 529
011	1,129	2,813	237.8 <sup>1</sup>	265 / 322
017	1,712	2,813	237.8 <sup>1</sup>	417 / 244
022	2,156	2,813	237.8 <sup>1</sup>	258 / 242
026	2,622	2,813	237.8 <sup>1</sup>	515 / 177
031	3,091	2,813	237.8 <sup>1</sup>	172 / 244
036	3,633	2,704	237.8 <sup>1</sup>	670 / 290
041	4,118	2,704	237.8 <sup>1</sup>	493 / 271
045	4,515	2,704	237.8 <sup>1</sup>	390 / 531
051	5,128	2,704	237.8 <sup>1</sup>	262 / 485
059	5,917	2,497	237.8 <sup>1</sup>	110 / 106
060	5,969	2,497	237.8 <sup>1</sup>	110 / 106
062	6,247	2,497	237.8 <sup>1</sup>	304 / 61
068	6,797	2,497	237.8 <sup>1</sup>	70 / 58
074	7,383	2,497	237.8 <sup>1</sup>	68 / 23
081	8,091	2,497	237.8 <sup>1</sup>	30 / 179
086	8,640	2,497	237.8 <sup>1</sup>	36 / 30
092	9,221	832	245.4	12 / 18
099	9,884	832	255.1	20 / 85
103	10,348	819	262.1	10 / 39
108	10,812	819	271.0	79 / 76
109	10,860	819	273.4	79 / 76
113	11,319	819	279.3	14 / 62
<b>Terrells Creek</b>				
004	413	4,204	375.4 <sup>1</sup>	29 / 28
009	949	4,204	375.4 <sup>1</sup>	27 / 33
019	1,877	4,204	375.4 <sup>1</sup>	40 / 80
024	2,366	4,204	375.4 <sup>1</sup>	29 / 63

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
024	2,406	4,204	375.4 <sup>1</sup>	29 / 63
026	2,565	4,204	375.4 <sup>1</sup>	29 / 92
033	3,266	3,722	375.4 <sup>1</sup>	119 / 23
035	3,498	3,722	375.4 <sup>1</sup>	133 / 63
043	4,296	3,722	375.4 <sup>1</sup>	135 / 38
048	4,754	3,722	375.4 <sup>1</sup>	91 / 37
051	5,127	3,722	375.4 <sup>1</sup>	27 / 273
057	5,715	3,722	375.4 <sup>1</sup>	166 / 75
060	5,979	3,722	375.4 <sup>1</sup>	270 / 32
070	7,036	3,654	375.4 <sup>1</sup>	285 / 33
076	7,596	3,654	375.5	214 / 63
090	9,001	3,654	376.8	290 / 200
097	9,681	3,654	377.3	92 / 20
103	10,273	3,654	378.8	34 / 244
115	11,459	3,484	379.9	108 / 247
121	12,147	3,484	380.6	11 / 603
130	12,999	2,615	381.4	100 / 292
140	14,016	2,615	382.5	200 / 45
147	14,683	2,615	383.2	39 / 32
147	14,732	2,615	383.5	39 / 32
151	15,069	2,615	384.2	116 / 24
158	15,810	2,615	385.8	241 / 57
173	17,341	2,615	387.4	108 / 24
180	18,037	2,615	389.1	259 / 39
189	18,932	2,405	390.4	53 / 33
194	19,416	2,405	392.2	29 / 44
205	20,456	2,405	395.8	44 / 97
211	21,059	2,405	398.4	80 / 10
217	21,699	2,405	404.0	42 / 30
223	22,334	2,193	411.0	17 / 106
230	22,966	2,193	416.7	76 / 22
<b>Terrells Creek (West)</b>				
003	290	6,130	394.4 <sup>1</sup>	60 / 40
008	798	6,130	394.4 <sup>1</sup>	50 / 30
013	1,296	6,100	394.4 <sup>1</sup>	60 / 30
018	1,823	6,100	394.4 <sup>1</sup>	55 / 25
024	2,359	6,100	394.4 <sup>1</sup>	40 / 30
031	3,090	6,100	394.4 <sup>1</sup>	45 / 24
039	3,908	6,100	394.4 <sup>1</sup>	50 / 37
039	3,947	6,100	394.4 <sup>1</sup>	50 / 37
043	4,320	6,100	394.4 <sup>1</sup>	100 / 65
044	4,360	6,100	400.6	100 / 65
048	4,795	6,100	401.5	56 / 54
048	4,842	6,100	401.9	56 / 54
054	5,409	6,100	402.6	70 / 40

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
059	5,878	6,100	403.8	67 / 30
065	6,535	6,100	406.1	40 / 103
070	6,954	6,100	407.1	27 / 90
075	7,456	6,100	408.2	28 / 42
080	7,975	6,100	409.7	33 / 38
084	8,422	6,100	411.6	53 / 33
090	8,958	6,100	413.1	133 / 32
096	9,579	6,100	414.9	28 / 37
100	10,023	6,100	416.7	55 / 28
106	10,596	6,100	418.6	260 / 30
112	11,188	6,100	420.2	64 / 34
117	11,704	6,100	421.6	32 / 90
122	12,230	6,100	422.5	40 / 54
128	12,816	6,100	423.6	75 / 62
135	13,485	4,997	424.3	40 / 126
143	14,256	4,997	425.3	50 / 27
149	14,874	4,997	426.1	28 / 27
149	14,940	4,997	427.7	28 / 27
154	15,402	4,997	428.4	60 / 31
159	15,934	4,997	428.9	48 / 22
164	16,410	4,997	429.8	25 / 53
170	16,971	4,997	431.9	30 / 36
174	17,450	4,997	434.0	19 / 48
180	18,005	4,954	435.6	25 / 25
186	18,581	4,954	437.1	86 / 23
194	19,362	4,954	438.4	30 / 87
199	19,903	4,954	439.3	220 / 30
205	20,535	4,954	440.1	81 / 48
211	21,064	4,804	440.7	28 / 189
216	21,570	4,804	441.3	27 / 173
221	22,091	4,804	442.0	159 / 20
226	22,643	4,804	442.6	30 / 67
230	22,985	4,804	443.1	25 / 32
236	23,582	4,125	444.5	65 / 29
241	24,125	4,125	445.4	142 / 31
245	24,487	4,125	446.1	46 / 23
249	24,928	4,125	447.5	360 / 30
254	25,429	4,125	448.4	16 / 141
260	26,040	4,125	448.8	20 / 20
266	26,588	4,125	452.5	20 / 20
271	27,113	4,125	457.4	59 / 17
276	27,640	4,049	461.2	25 / 31
283	28,301	4,049	465.2	18 / 25
289	28,905	4,049	467.9	53 / 22
296	29,633	4,049	469.8	117 / 25

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
302	30,167	4,049	470.5	164 / 26
307	30,738	4,049	471.2	40 / 40
308	30,778	4,049	471.6	40 / 40
313	31,338	4,049	472.6	132 / 25
320	31,962	4,049	473.3	64 / 126
326	32,594	4,049	473.7	121 / 30
332	33,229	3,914	474.3	244 / 27
339	33,934	3,914	474.7	62 / 90
345	34,548	3,914	476.2	30 / 205
352	35,225	3,625	477.8	262 / 33
360	35,965	3,625	478.9	82 / 195
366	36,641	3,442	479.8	74 / 122
373	37,331	3,442	480.8	40 / 123
379	37,933	3,442	482.3	104 / 101
386	38,579	3,442	483.6	186 / 25
392	39,150	3,442	484.8	104 / 43
398	39,838	3,442	486.2	43 / 30
405	40,470	3,442	487.8	20 / 71
413	41,267	3,442	490.0	55 / 55
413	41,319	3,442	490.4	55 / 55
420	42,005	3,442	491.7	28 / 73
426	42,626	3,442	492.9	241 / 76
432	43,181	3,442	493.4	151 / 25
439	43,885	3,442	494.7	23 / 30
445	44,466	3,442	497.2	25 / 114
451	45,073	2,452	498.2	119 / 195
457	45,662	2,452	498.5	292 / 20
462	46,164	2,452	498.7	277 / 40
469	46,886	2,452	499.5	20 / 412
475	47,494	2,452	500.8	20 / 241
482	48,194	2,418	503.4	30 / 40
488	48,750	2,418	505.5	22 / 22
488	48,800	2,418	506.0	22 / 22
494	49,403	2,418	507.4	106 / 114
501	50,061	2,418	508.1	15 / 213
506	50,609	2,418	508.9	22 / 123
514	51,353	2,418	510.9	60 / 14
520	52,012	2,418	514.3	14 / 56
528	52,768	2,418	516.1	25 / 111
535	53,528	1,499	517.0	34 / 46
541	54,113	1,448	519.2	41 / 47
546	54,634	1,448	521.2	44 / 61
552	55,218	1,448	523.5	127 / 12
558	55,847	1,448	527.2	29 / 30
564	56,411	1,394	529.5	44 / 182

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
<b>Tick Creek</b>				
005	500	5,850	407.4 <sup>1</sup>	92 / 30
010	1,000	5,850	409.1	74 / 52
015	1,500	5,850	411.2	26 / 92
020	2,000	5,850	412.7	130 / 56
025	2,500	5,850	413.4	35 / 224
028	2,843	5,850	413.8	92 / 159
035	3,500	5,850	414.5	327 / 36
040	4,000	5,850	414.9	157 / 93
045	4,500	5,850	415.4	34 / 337
052	5,233	5,850	416.1	404 / 79
055	5,500	5,850	416.3	378 / 40
060	6,000	5,840	416.9	228 / 22
064	6,355	5,840	417.4	282 / 134
072	7,185	5,840	418.3	339 / 50
075	7,500	5,840	418.7	373 / 26
079	7,902	5,840	419.4	110 / 319
087	8,698	5,840	420.7	549 / 21
090	9,000	5,840	421.1	511 / 63
095	9,500	5,840	421.9	414 / 43
100	10,000	5,840	422.9	364 / 22
105	10,500	5,840	423.8	262 / 57
108	10,813	5,840	424.4	334 / 61
109	10,859	5,840	425.8	334 / 61
110	11,000	5,810	425.9	274 / 132
115	11,500	5,780	426.5	301 / 26
120	12,000	5,780	427.3	172 / 61
125	12,500	5,780	428.2	92 / 204
130	13,000	5,780	429.0	67 / 188
135	13,500	5,780	430.0	42 / 222
140	14,000	5,780	431.3	93 / 119
145	14,500	5,780	432.4	296 / 28
150	15,000	5,780	433.1	38 / 284
155	15,500	5,730	434.1	142 / 201
160	16,000	5,730	434.4	452 / 127
165	16,500	5,730	434.5	86 / 278
170	16,963	5,730	434.9	44 / 311
177	17,665	5,680	438.2	21 / 335
180	18,000	5,680	439.3	45 / 377
181	18,083	5,680	439.1	75 / 75
181	18,122	5,680	441.6	75 / 75
185	18,500	5,680	443.4	80 / 72
190	19,000	5,680	446.1	36 / 95
195	19,500	5,680	448.6	125 / 58
200	20,000	5,680	450.6	76 / 40

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
204	20,429	5,680	452.4	69 / 58
210	21,000	5,680	454.0	84 / 62
215	21,500	5,680	455.1	112 / 79
219	21,893	5,680	455.5	52 / 90
225	22,500	5,680	456.5	137 / 142
230	23,000	5,600	457.0	318 / 26
235	23,500	5,600	457.3	219 / 199
240	24,000	5,600	457.5	30 / 466
242	24,163	5,600	456.9	70 / 47
242	24,221	5,600	457.7	70 / 47
245	24,500	5,600	459.6	92 / 80
250	25,000	5,600	460.9	40 / 335
255	25,500	5,600	462.1	107 / 114
260	26,000	5,600	463.4	61 / 181
265	26,500	5,600	464.4	143 / 315
270	27,000	5,600	464.9	240 / 191
272	27,151	5,600	465.0	198 / 259
285	28,500	4,620	466.5	73 / 206
290	29,000	4,620	467.1	33 / 242
295	29,500	4,620	467.6	95 / 74
296	29,554	4,620	467.6	73 / 68
296	29,610	4,620	468.0	73 / 68
300	30,000	3,520	468.8	61 / 360
305	30,500	3,520	469.0	181 / 216
310	30,962	3,520	469.3	304 / 22
316	31,624	3,520	470.1	70 / 73
320	32,000	3,520	470.8	91 / 171
325	32,500	3,520	471.9	90 / 73
330	33,000	3,520	473.9	24 / 190
335	33,500	3,520	475.6	221 / 34
340	34,015	3,520	476.9	227 / 156
345	34,500	3,520	477.7	100 / 441
350	35,000	3,520	478.6	49 / 64
355	35,500	3,520	483.2	20 / 55
360	36,000	3,520	486.2	71 / 87
365	36,500	3,240	487.8	121 / 110
370	37,000	3,240	488.6	65 / 378
375	37,500	3,240	489.3	33 / 333
380	38,000	3,240	490.3	65 / 188
385	38,500	3,240	491.6	20 / 66
390	39,000	3,240	493.8	53 / 126
395	39,500	3,240	494.8	105 / 60
400	40,000	3,240	496.1	24 / 189
405	40,500	3,240	497.2	49 / 210
407	40,653	3,240	497.6	66 / 298

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
415	41,500	1,720	499.7	103 / 152
421	42,100	1,720	501.3	87 / 45
422	42,150	1,720	503.5	87 / 45
424	42,359	1,720	503.8	38 / 106
431	43,053	1,720	505.0	50 / 401
435	43,500	1,720	505.9	17 / 178
440	44,000	1,720	509.0	19 / 110
442	44,185	1,720	509.0	18 / 19
443	44,253	1,720	512.5	18 / 19
446	44,598	1,720	514.5	57 / 54
450	45,000	1,720	515.3	52 / 50
455	45,500	1,720	516.5	130 / 60
460	46,000	1,482	517.3	92 / 114
465	46,500	1,482	518.4	41 / 135
470	47,000	1,482	520.0	135 / 105
475	47,500	1,482	522.2	49 / 72
481	48,067	1,482	525.9	175 / 20
485	48,500	1,482	527.6	76 / 98
490	49,000	1,482	529.6	34 / 131
495	49,500	1,482	532.0	130 / 59
500	50,000	1,482	534.5	82 / 86
505	50,500	1,482	536.2	147 / 16
510	51,000	1,482	538.1	110 / 30
515	51,500	1,482	540.5	172 / 30
520	52,000	1,482	542.4	150 / 20
525	52,500	1,482	544.3	57 / 109
530	53,000	1,482	546.4	139 / 27
535	53,500	1,482	548.9	58 / 74
537	53,715	1,482	550.2	31 / 111
538	53,779	1,482	554.6	31 / 111
540	54,000	1,078	554.7	169 / 170
<b>Tick Creek Tributary</b>				
004	425	1,490	468.1 <sup>1</sup>	52 / 74
009	930	1,490	468.1 <sup>1</sup>	23 / 148
014	1,449	1,490	469.0	20 / 100
020	1,984	1,490	473.4	31 / 44
025	2,500	1,490	477.2	32 / 60
030	3,000	1,490	479.8	20 / 132
<b>Tick Creek Tributary 1</b>				
004	407	1,807	498.4 <sup>1</sup>	318 / 11
951	951	1,807	499.7	150 / 68
014	1,408	1,807	500.6	99 / 117
020	1,985	1,807	501.9	97 / 69
025	2,502	1,807	503.4	25 / 72
028	2,766	1,743	504.7	28 / 33



**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
031	3,143	1,743	507.4	18 / 74
036	3,573	1,743	508.7	8 / 80
040	3,978	1,743	510.7	30 / 49
045	4,482	1,743	514.0	73 / 61
048	4,770	1,743	515.3	103 / 108
049	4,899	1,743	519.8	103 / 108
055	5,465	1,574	519.9	54 / 276
061	6,090	1,574	520.0	291 / 7
065	6,531	1,417	520.3	220 / 31
070	7,029	1,417	521.1	142 / 8
075	7,457	1,417	522.8	227 / 6
080	7,987	1,417	524.2	217 / 6
085	8,469	1,417	526.5	192 / 6
089	8,931	1,417	529.1	130 / 6
094	9,414	1,417	531.1	6 / 164
<b>Turkey Creek</b>				
004	365	1,909	324.3	32 / 22
009	870	1,909	327.7	47 / 22
014	1,402	1,909	330.3	30 / 28
019	1,902	1,909	331.8	52 / 54
019	1,944	1,909	332.0	52 / 54
025	2,493	1,909	334.2	30 / 26
031	3,109	1,909	340.2	34 / 67
037	3,681	1,909	343.0	37 / 29
042	4,232	1,909	345.9	23 / 59
048	4,815	1,909	348.6	18 / 27
049	4,881	1,909	349.7	18 / 27
054	5,421	1,909	352.5	20 / 39
061	6,075	1,732	357.1	69 / 88
067	6,727	1,732	359.1	30 / 70
073	7,256	1,732	361.1	21 / 47
077	7,742	1,732	363.8	64 / 34
078	7,831	1,732	364.5	35 / 26
079	7,894	1,732	366.8	35 / 26
083	8,268	1,732	367.3	57 / 101
088	8,834	1,732	367.8	120 / 29
093	9,295	1,732	368.8	38 / 91
099	9,888	1,732	370.5	13 / 164
104	10,408	1,732	372.6	20 / 114
109	10,882	1,732	374.7	34 / 140
118	11,780	959	376.9	76 / 71
125	12,490	959	379.0	25 / 21
131	13,109	959	384.3	26 / 41
138	13,843	857	387.6	21 / 22
139	13,906	857	389.0	21 / 22

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
145	14,482	857	392.3	70 / 23
151	15,100	857	395.3	60 / 38
158	15,770	857	398.0	23 / 50
166	16,622	857	401.7	50 / 63
170	16,954	857	403.0	57 / 32
176	17,628	857	407.6	16 / 16
182	18,157	857	412.2	40 / 30
190	19,007	857	416.7	31 / 25
197	19,685	348	420.3	18 / 37
201	20,083	348	422.2	19 / 12
209	20,864	348	428.5	17 / 17
209	20,926	348	428.8	17 / 17
213	21,345	348	430.6	20 / 19
219	21,940	348	436.6	19 / 19
221	22,065	348	437.0	21 / 21
221	22,127	348	437.4	21 / 21
225	22,497	348	440.5	98 / 51
230	22,962	348	445.2	13 / 19
235	23,477	348	451.5	11 / 10
<b>Tysons Creek</b>				
163	16,283	3,100	319.4	47 / 61
168	16,846	3,100	322.3	67 / 31
176	17,580	2,630	324.8	29 / 72
183	18,294	2,630	327.4	95 / 32
188	18,845	2,630	330.9	19 / 128
195	19,536	2,630	333.8	132 / 26
205	20,540	2,630	338.4	17 / 93
212	21,229	1,890	342.3	100 / 17
214	21,360	1,890	343.2	26 / 27
215	21,460	1,890	349.2	27 / 27
216	21,562	1,890	349.6	63 / 57
222	22,239	1,890	349.6	27 / 96
232	23,214	1,860	354.4	17 / 53
240	23,973	1,860	361.5	17 / 79
250	24,950	1,860	367.3	98 / 18
257	25,740	1,860	372.8	41 / 53
264	26,427	1,860	376.9	148 / 17
272	27,175	1,580	380.6	52 / 58
279	27,893	1,580	385.4	71 / 74
286	28,637	1,580	390.2	60 / 67
292	29,204	1,580	393.2	75 / 21
298	29,776	1,580	395.6	72 / 70
304	30,442	1,580	398.0	23 / 69
312	31,192	1,580	402.4	18 / 63
313	31,280	1,580	404.1	114 / 63

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
313	31,324	1,580	406.3	114 / 63
314	31,389	1,580	406.4	84 / 66
319	31,908	1,580	406.9	51 / 74
325	32,454	1,580	409.3	53 / 75
330	33,017	1,580	412.6	43 / 32
335	33,462	1,580	414.1	122 / 109
<b>Tyson's Creek Tributary</b>				
001	133	1,350	341.3 <sup>1</sup>	28 / 71
005	519	1,350	346.1	50 / 32
010	1,000	1,350	349.3	21 / 59
016	1,595	1,320	353.2	46 / 54
021	2,142	1,320	355.6	88 / 31
026	2,565	1,320	359.2	76 / 39
031	3,062	1,290	359.3	71 / 41
040	3,965	1,260	362.2	93 / 63
047	4,749	1,260	366.5	27 / 41
053	5,297	1,230	371.3	32 / 42
059	5,949	1,230	377.9	34 / 40
066	6,563	731	385.9	72 / 21
<b>Varnell Creek</b>				
005	500	3,158	484.6 <sup>1</sup>	46 / 27
011	1,069	3,158	486.6	32 / 57
017	1,718	3,158	489.2	69 / 61
022	2,198	3,158	490.0	45 / 46
022	2,237	3,158	490.4	45 / 46
029	2,935	3,158	491.6	175 / 233
035	3,473	3,158	492.2	30 / 35
036	3,619	3,158	494.2	30 / 35
042	4,154	3,073	496.6	136 / 50
048	4,808	3,073	498.1	68 / 128
054	5,381	3,073	499.9	29 / 118
060	6,000	3,073	501.7	252 / 34
066	6,622	2,900	503.3	32 / 114
071	7,083	2,689	505.0	81 / 39
075	7,500	2,689	506.2	51 / 44
080	8,000	2,689	507.6	23 / 125
086	8,636	2,689	508.4	32 / 218
092	9,173	2,689	508.8	209 / 63
100	10,000	2,631	510.5	25 / 170
105	10,500	2,631	513.0	20 / 87
110	11,000	2,631	517.0	82 / 17
115	11,542	2,631	519.6	43 / 35
121	12,146	2,631	521.6	146 / 42
128	12,757	2,631	522.7	23 / 180
134	13,394	2,631	523.8	129 / 34

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
140	14,000	2,418	525.0	175 / 60
146	14,639	2,418	525.9	18 / 266
151	15,142	2,418	526.7	49 / 156
157	15,654	2,418	528.4	27 / 157
<b>Weaver Creek</b>				
155	15,500	851	237.8 <sup>1</sup>	116 / 119
160	16,000	750	237.8 <sup>1</sup>	48 / 166
165	16,500	750	237.8 <sup>1</sup>	22 / 103
170	17,000	750	237.8 <sup>1</sup>	136 / 8
175	17,500	750	237.8 <sup>1</sup>	44 / 8
180	18,000	750	237.8 <sup>1</sup>	100 / 9
183	18,350	750	237.8 <sup>1</sup>	17 / 24
190	19,000	750	237.8 <sup>1</sup>	10 / 17
195	19,500	750	237.8 <sup>1</sup>	13 / 52
200	20,049	750	237.8 <sup>1</sup>	14 / 18
205	20,500	750	238.1	4 / 73
211	21,082	750	240.2	13 / 28
215	21,500	750	242.4	22 / 13
222	22,158	750	247.4	49 / 10
225	22,500	431	249.2	12 / 119
232	23,189	431	250.4	8 / 4
236	23,634	431	256.3	15 / 16
242	24,203	431	260.4	13 / 8
246	24,569	431	267.6	23 / 23
250	25,000	431	272.3	31 / 20
254	25,378	431	276.8	13 / 23
260	26,000	431	285.1	11 / 19
266	26,631	431	296.6	9 / 12
<b>Weaver Creek Tributary</b>				
010	1,000	742	238.6 <sup>1</sup>	84 / 153
016	1,585	742	238.6 <sup>1</sup>	30 / 84
020	2,000	742	238.6 <sup>1</sup>	29 / 62
025	2,500	742	238.6 <sup>1</sup>	26 / 40
030	3,000	742	238.6 <sup>1</sup>	21 / 22
036	3,582	742	238.6 <sup>1</sup>	13 / 27
043	4,325	742	238.6 <sup>1</sup>	10 / 78
046	4,618	742	238.6 <sup>1</sup>	50 / 30
050	5,000	742	238.6 <sup>1</sup>	20 / 30
053	5,334	742	237.9	20 / 53
060	6,000	742	241.0	27 / 34
065	6,500	496	242.6	10 / 44
070	7,000	496	245.0	10 / 45
<b>Welch Creek</b>				
006	563	1,077	465.6 <sup>1</sup>	95 / 120
010	1,000	1,077	465.6 <sup>1</sup>	137 / 12
015	1,500	1,077	466.2	205 / 8

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
020	2,000	1,077	469.5	119 / 8
026	2,598	1,077	474.4	22 / 104
031	3,086	1,077	478.2	20 / 23
<b>West Price Creek</b>				
075	7,494	671	468.9	29 / 54
079	7,942	628	470.8	37 / 24
081	8,145	628	473.6	70 / 16
085	8,478	570	476.7	49 / 12
090	8,969	570	479.8	9 / 29
<b>White Oak Creek Tributary 1</b>				
020	2,000	351	237.8 <sup>1</sup>	44 / 71
025	2,500	351	237.8 <sup>1</sup>	8 / 13
030	3,000	351	237.8 <sup>1</sup>	17 / 31
035	3,500	351	237.8 <sup>1</sup>	6 / 13
040	4,000	351	237.8 <sup>1</sup>	9 / 8
045	4,500	351	243.1	30 / 33
050	5,000	351	252.6	5 / 11
<b>Wilkinson Creek</b>				
006	559	2,976	337.0 <sup>1</sup>	25 / 12
019	1,863	2,976	337.0 <sup>1</sup>	53 / 20
024	2,428	2,976	337.0 <sup>1</sup>	48 / 15
030	3,027	2,976	338.7	35 / 44
035	3,546	2,976	342.2	15 / 49
040	4,035	2,976	346.6	43 / 48
054	5,450	2,876	357.0	13 / 24
061	6,059	2,876	363.4	52 / 13
067	6,657	2,876	368.8	13 / 13
071	7,128	2,876	373.6	51 / 15
076	7,596	2,876	376.0	27 / 19
081	8,145	2,876	380.1	24 / 23
088	8,804	2,876	383.7	26 / 15
093	9,320	2,876	387.0	22 / 67
098	9,837	2,876	388.5	30 / 52
103	10,270	2,710	389.7	43 / 14
117	11,671	2,536	393.6	28 / 44
127	12,667	2,536	395.4	154 / 59
129	12,878	2,536	395.6	217 / 30
130	12,964	2,536	395.9	217 / 30
134	13,407	2,536	395.7	15 / 29
139	13,932	2,536	398.1	43 / 107
151	15,139	2,320	400.6	71 / 77
156	15,592	2,320	402.3	12 / 54
162	16,210	2,320	404.6	57 / 69
167	16,709	2,320	405.4	15 / 216
175	17,548	2,320	406.5	124 / 102
185	18,517	2,320	409.4	38 / 50

**Table 17 - Limited Detailed Flood Hazard Data**

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
191	19,062	2,320	412.1	51 / 90
197	19,682	2,320	413.0	136 / 163
203	20,259	2,088	413.5	39 / 318
207	20,729	2,088	413.8	15 / 338
209	20,936	2,088	414.0	20 / 100
210	21,018	2,088	416.6	20 / 100
216	21,635	2,088	417.3	170 / 45
223	22,269	1,908	417.9	212 / 125
373	37,259	1,097	501.2	19 / 25
377	37,740	1,097	508.7	7 / 7
378	37,823	1,097	511.8	20 / 40
385	38,459	745	513.2	40 / 20
386	38,649	745	513.5	19 / 14
387	38,729	745	514.3	12 / 13
390	38,959	745	515.8	9 / 21
394	39,406	745	521.1	23 / 46
405	40,519	745	531.1	26 / 22
414	41,386	745	543.6	19 / 19
419	41,934	745	551.6	22 / 25
424	42,390	745	557.9	20 / 28
431	43,057	745	566.2	22 / 25
436	43,608	745	574.5	35 / 20
<b>Windfall Branch</b>				
017	1,654	782	237.8 <sup>1</sup>	54 / 56
020	2,000	782	237.8 <sup>1</sup>	24 / 10
025	2,500	760	237.8 <sup>1</sup>	7 / 6
030	3,031	760	248.4	35 / 25

<sup>1</sup>Elevation includes backwater effects

## 5.3 Coastal Analyses

This section is not applicable to this FIS project. Table 18 "Summary of Coastal Analyses" does not apply to Chatham County.

## 6.0 Mapping Methods

### 6.1 Vertical and Horizontal Control

#### Vertical Datum

All FISs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. With the finalization of the North American Vertical Datum of 1988 (NAVD 88), all North Carolina FISs have been prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown on the FIRM for Chatham County are referenced to NAVD 88. Structure and ground elevations in the county must, therefore, be referenced to NAVD 88. It is important to note that FISs for adjacent communities in neighboring states may be referenced to NGVD 29. This may result in BFE differences across political boundaries between the communities.

As noted above, the elevations shown in this FIS are referenced to NAVD 88. Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. The conversion factor for Chatham County is # feet. The locations used to establish the conversion factor were USGS quadrangle corners that fell within the county, as well as those that were within 2.5 miles outside the county. The benchmarks are referenced to NAVD 88. Table 21, "Datum Conversion Locations and Values," is shown below.

Table 21, "Datum Conversion Locations and Values."

**Table 21 - Datum Conversion Locations and Values**

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
35.75	-79.50	-0.59
35.75	-79.38	-0.64
35.75	-79.25	-0.80
35.75	-79.12	-0.78
35.75	-79.00	-0.80
35.62	-79.50	-0.70
35.63	-79.37	-0.76
35.63	-79.25	-0.75
35.63	-79.12	-0.75
35.62	-79.00	-0.79
Average conversion in Chatham County from NGVD 29 to NAVD 88 = -0.74 feet		

The vertical datum conversion factor for all flooding sources which run along a county boundary are in accordance with the conversion factor used in those contiguous counties.

BFEs shown on the FIRM represent whole-foot rounded values. For example, a 1% annual chance water-surface elevation of 102.4 feet will appear as 102 on the FIRM and 102.6 feet will appear as 103. Therefore, users who wish to convert the elevations in this FIS to NGVD 29 should apply the stated conversion factor(s) to elevations shown on the Flood Profiles and/or Water-surface elevation rasters and supporting data tables in the FIS Report, which are shown, at a minimum, to the nearest 0.1 foot.

For more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (<http://www.ngs.noaa.gov>).

#### Vertical Control Monuments

Qualifying bench marks within Chatham County that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (NSRS) as First or Second Order Vertical, with a vertical stability classification of A, B, or C, are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier (PID).

The National Geodetic Survey establishes precisely located monuments on the North Carolina Grid System and Bench Marks referenced to a vertical datum (NGVD 1929 and NAVD 1988).

Bench marks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

- Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)
- Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)
- Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monument below frost line)
- Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

Monuments with a Stability D classification may be used as Elevation Reference Marks (ERMs) when a Stability C or better monument

is not an option. These ERMs must be approved by NCGS and can be set and used as elevation bench marks to establish vertical control and produce NC DFIRMs. Including such ERMs will greatly augment North Carolina's useable vertical control network.

In addition, when local jurisdictions have established their own vertical monument network, these monuments may also be shown on the FIRM with the appropriate designations. Local monuments will be placed on the FIRM if the community has requested that they be included and if the monuments meet the aforementioned criteria.

North Carolina Geodetic Survey (NCGS) and contractor surveyed vertical control monuments will be shown on the FIRM panels. Those cataloged by NCGS meet similar requirements to the NGS monuments as described above. Most monuments that have been cataloged by NCGS have been established to NGS standards, but have not been submitted to NGS for inclusion into the NSRS. The qualifying criteria for depicting bench marks established by the State's contractors on the new digital FIRM panels include:

- GPS surveying of permanent 3-D survey monuments to 5-centimeter or better local network accuracy guidelines, in accordance with NOAA Technical Memorandum NOS NGS-58 "Guidelines for Establishing GPS-Derived Ellipsoid Heights (Standards: 2 cm and 5 cm)," and conversion to NAVD 88 orthometric heights using NGS' latest geoid mode;
- Requiring a stability classification of "C" or better; and
- Submitting GPS files and station descriptions to NCGS.

To obtain current information for cataloging local bench marks in the NSRS, please visit the Data Sheet page of the NGS website at <http://www.ngs.noaa.gov/cgi-bin/datasheet.prl>, or contact the NGS Information Services Branch at:

**NGS Information Services  
NOAA, N/NGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-32822  
(301) 713-3242**

Information regarding the NCGS or State contractor bench marks can be obtained through the NCGS website at [www.ncgs.state.nc.us](http://www.ncgs.state.nc.us), or by phone at (919) 733-3836.

It is important to note that temporary vertical monuments, sometimes called Elevation Reference Marks, are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, interested individuals may contact FEMA to access this information.

### **Horizontal Datum and Control**

The digital files that comprise the FIRM are georeferenced to an established coordinate system. The coordinate system used for the production of this FIRM is North Carolina State Plane (FIPSZONE 3200) referenced to the North American Datum of 1983 (NAD83), GRS80 ellipsoid.

## **6.2 Base Map**

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features.

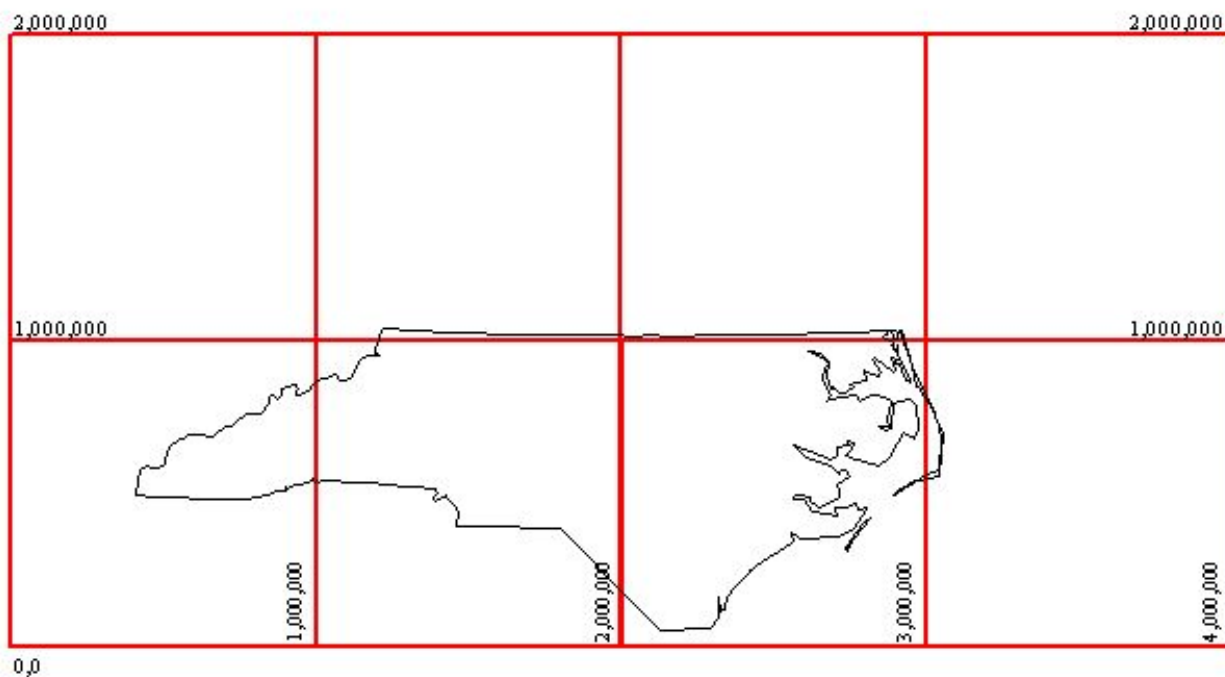
The projection used in the preparation of this map was the North Carolina State Plane Coordinate System. The horizontal datum was NAD83, GRS80 spheroid. Differences in datum, spheroid, or projection used in the production of FIRMs for adjacent states may result



in slight positional differences in map features across the state boundary. These differences do not affect the accuracy of this FIRM.

As part of the North Carolina CTS Initiative, North Carolina digital FIRM panel numbers are consistent with the North Carolina Land Records Management Program (LRMP).

The 11-digit digital FIRM panel numbering system for North Carolina is: SS MM LLLL PP X, where SS = State Federal Information Processing Code (37); MM = Easting-Northing (EN) 1,000,000-foot coordinates; LLLL = LRMP map numbers to include the EN 100,000-foot coordinates, and the EN 10,000-foot coordinates; PP = place holders for additional EN 1,000-foot coordinates; and X = suffix ("J" for the initial edition). North Carolina's State Plane Coordinate System origin is outside the State boundary to the southwest (in Georgia), the eastings range from approximately 0,404,000 (Tennessee border) to 3,040,000 (Atlantic Ocean); and the northings range from approximately 0,045,000 (South Carolina border) to 1,043,000 (Virginia border). Digital FIRM panels were compiled at either 1"=1,000', covering an area of 20,000 feet x 20,000 feet (20" x 20" panels); or at 1"=500', covering an area of 10,000 feet x 10,000 feet (20" x 20" panels). An additional 2 digits (both zeros) are held in reserve as a "place holder" in the event that future FIRMs are printed at a larger scale; e.g., 1"=250', covering an area of 5,000 feet x 5,000 feet for which the 1,000-foot coordinates would either be 0 or 5.



**Figure 3 - North Carolina's State Plane Coordinate System**

## 6.3 Floodplain and Floodway Delineation

### Floodplain Boundaries

For streams restudied by detailed and limited detailed methods, the 1% and 0.2% annual chance floodplains were delineated using flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic data acquired using airborne Light Detection and Ranging (LIDAR). This LIDAR data was acquired during the (insert date from basin plan and update for map maintenance, if necessary) flying season.

The topographic data satisfies a vertical root-mean-square error (RMSE) accuracy standard of 20 cm (1.3 feet accuracy at the 95% confidence limit) for the Outer Banks and 25 cm (1.6 feet accuracy at the 95% confidence limit) for those portions of the basin lying west of the Outer Banks. These data could be contoured at roughly a 2-foot vertical contour interval. All elevations were referenced to the NAVD 88 and reflect orthometric heights. Variably spaced, bare-earth digital topographic data in ASCII point file format were combined with imagery (either flown concurrently with the LIDAR data or using existing digital orthophotos) to establish a Triangulated Irregular Network (TIN) of digital elevation points, which include selected breaklines to be used for hydraulic modeling. Furthermore, a uniformly spaced sampling of the TIN resulted in uniformly spaced Digital Elevation Models (DEMs), with 20 ft x 20 ft post spacing, which was generated in multiple file formats.

The 1% annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones VE, AO, AH, A99, AR, A, and AE), and the 0.2% annual chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundaries have been shown.

### Floodway Delineation

The floodways presented in this FIS were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (Table 22, "Floodway Data"). The computed floodway is shown on the FIRM. In cases where the floodway and 1% annual chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown. In areas where the top of the bridge or road is higher than the 1.0-percent annual chance (100-year) flood, the FIRM will show the flood discharge as contained within the structure for emergency management purposes. It is important to note that FEMA and community floodway regulations still apply in and around those areas.

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
<b>Dry Creek</b>								
012	1,195	77	588	8.0	347.9 <sup>1</sup>	343.5	344.1	0.6
022	2,221	132	657	6.8	355.0	355.0	355.7	0.7
034	3,442	113	680	6.6	363.3	363.3	364.0	0.7
058	5,761	124	828	5.4	376.0	376.0	376.7	0.7
075	7,469	161	1,009	4.4	385.2	385.2	385.9	0.7
089	8,880	104	873	5.0	395.8	395.8	396.8	1.0
102	10,198	89	584	7.5	406.2	406.2	406.9	0.7
115	11,530	263	1,182	3.7	415.4	415.4	416.2	0.8
131	13,096	123	575	7.6	423.6	423.6	424.2	0.6
141	14,081	148	1,496	2.9	432.9	432.9	432.9	0.0
155	15,508	160	1,566	2.7	434.2	434.2	434.5	0.3
171	17,125	222	1,628	2.6	435.8	435.8	436.3	0.5
194	19,420	283	1,657	2.4	438.6	438.6	439.3	0.6
208	20,812	100	969	4.2	441.4	441.4	442.2	0.8
225	22,538	229	1,292	3.1	444.0	444.0	444.9	0.9
249	24,941	230	1,462	2.8	448.1	448.1	448.9	0.8
259	25,901	169	944	3.6	450.0	450.0	450.8	0.8
281	28,076	280	1,276	2.7	453.8	453.8	454.2	0.4
297	29,713	237	1,643	2.0	458.9	458.9	459.3	0.4
<b>East Price Creek</b>								
070	6,954	85	436	2.4	406.2	406.2	407.2	1.0
<b>Haw River</b>								
006	606	259	3,216	5.6	176.5 <sup>1</sup>	160.4	160.4	0.0
021	2,071	259	3,408	5.3	176.5 <sup>1</sup>	161.9	161.9	0.0
035	3,491	264	3,658	4.9	176.5 <sup>1</sup>	163.0	163.0	0.0
060	5,965	260	4,042	4.4	176.5 <sup>1</sup>	164.4	164.4	0.0
082	8,191	279	4,226	4.3	176.5 <sup>1</sup>	166.5	166.5	0.0
096	9,605	270	4,427	4.1	176.5 <sup>1</sup>	167.2	167.2	0.0
109	10,919	283	4,626	3.9	176.5 <sup>1</sup>	167.8	167.8	0.0
127	12,689	224	3,507	5.1	176.5 <sup>1</sup>	169.3	169.3	0.0
142	14,238	236	4,450	4.0	176.5 <sup>1</sup>	171.0	171.0	0.0

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
158	15,762	236	4,581	3.9	176.5 <sup>1</sup>	171.8	171.8	0.0
170	17,020	236	4,662	3.9	176.5 <sup>1</sup>	172.4	172.4	0.0
187	18,705	297	5,775	3.1	176.5 <sup>1</sup>	172.9	173.0	0.0
203	20,289	303	5,623	3.2	176.5 <sup>1</sup>	173.3	173.3	0.0
215	21,527	288	5,409	3.3	176.5 <sup>1</sup>	173.6	173.6	0.0
222	22,165	229	4,128	4.4	176.5 <sup>1</sup>	173.7	173.7	0.0
451	45,146	849	13,999	5.1	237.8 <sup>1</sup>	229.9	229.9	0.0
492	49,203	1,114	15,315	4.6	237.8 <sup>1</sup>	234.9	235.1	0.2
519	51,933	486	7,630	9.3	255.2	255.2	255.7	0.4
539	53,898	635	9,775	7.3	268.5	268.5	268.8	0.2
564	56,356	1,101	16,666	4.3	275.3	275.3	275.8	0.5
593	59,314	568	11,352	6.3	286.8	286.8	287.5	0.7
613	61,316	438	10,062	7.1	291.7	291.7	292.5	0.8
640	63,962	793	16,088	4.4	296.4	296.4	297.3	0.9
664	66,392	510	9,980	7.1	299.4	299.4	300.1	0.7
688	68,806	626	10,697	6.6	305.9	305.9	306.8	1.0
716	71,572	687	12,893	5.5	311.2	311.2	312.1	0.9
733	73,282	540	10,224	6.9	315.5	315.5	316.3	0.8
744	74,370	832	12,185	5.8	318.3	318.3	319.0	0.7
755	75,464	905	12,141	5.8	326.0	326.0	326.1	0.1
780	77,964	627	10,311	6.8	330.5	330.5	330.7	0.2
794	79,431	433	8,861	7.9	333.9	333.9	334.2	0.4
814	81,413	470	9,737	7.2	339.2	339.2	339.8	0.6
839	83,913	545	12,167	5.8	343.8	343.8	344.6	0.9
866	86,626	752	16,873	4.2	347.2	347.2	348.1	0.9
917	91,705	660	11,160	6.1	353.4	353.4	353.8	0.4
946	94,583	476	6,796	10.0	364.0	364.0	364.1	0.1
969	96,938	954	11,244	6.1	374.3	374.3	374.7	0.4
1000	100,042	805	15,417	4.4	380.6	380.6	381.6	1.0
1035	103,486	935	14,916	4.5	385.2	385.2	386.1	0.9
1069	106,917	1,185	16,482	4.1	388.3	388.3	389.3	0.9
1087	108,718	456	9,833	6.8	390.5	390.5	391.3	0.8
1099	109,854	386	9,401	7.2	392.8	392.8	393.3	0.5
1132	113,184	833	20,518	3.3	395.2	395.2	396.1	0.9
1163	116,313	442	10,647	6.3	396.8	396.8	397.5	0.7
1203	120,349	533	9,827	6.5	402.3	402.3	402.9	0.6
1237	123,667	569	9,876	6.5	407.6	407.6	408.3	0.7
1258	125,756	677	12,040	5.3	410.7	410.7	411.7	1.0
1286	128,579	886	15,307	4.2	414.1	414.1	414.7	0.7
<b>Indian Creek (into Deep River)</b>								
001	118	84	1,330	4.0	240.4 <sup>1</sup>	228.4	228.7	0.3
010	1,041	126	1,505	3.6	240.4 <sup>1</sup>	229.0	229.2	0.2
052	5,220	298	3,777	1.4	240.4 <sup>1</sup>	230.5	231.1	0.7
085	8,539	170	2,037	2.6	240.4 <sup>1</sup>	231.7	232.5	0.8
131	13,059	663	3,474	1.0	240.4 <sup>1</sup>	232.6	233.5	0.9

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
160	16,020	404	1,586	2.3	240.4 <sup>1</sup>	237.0	237.8	0.8
190	19,040	223	1,224	2.9	245.2	245.2	246.0	0.8
195	19,480	118	585	6.0	245.9	245.9	246.7	0.8
200	19,998	129	868	4.0	248.9	248.9	249.3	0.4
204	20,417	167	870	4.0	249.7	249.7	250.4	0.7
<b>Little Indian Creek</b>								
005	476	328	1,187	2.7	240.4 <sup>1</sup>	226.7	227.6	1.0
038	3,816	387	1,467	2.2	240.4 <sup>1</sup>	231.0	231.9	0.9
066	6,565	215	1,256	2.6	240.4 <sup>1</sup>	237.9	238.6	0.8
087	8,726	350	1,518	2.0	240.4 <sup>1</sup>	240.4	241.4	1.0
101	10,069	89	636	4.7	244.1	244.1	244.9	0.8
113	11,272	66	422	7.0	248.2	248.2	248.7	0.5
121	12,125	129	576	5.2	251.8	251.8	252.3	0.5
<b>Loves Creek</b>								
005	456	73	474	6.4	500.9 <sup>1</sup>	499.6	500.6	1.0
010	1,000	82	706	4.3	501.8	501.8	502.8	1.0
020	2,000	52	268	11.3	509.0	509.0	509.2	0.3
036	3,598	91	527	5.7	520.9	520.9	521.2	0.3
045	4,500	248	950	3.2	527.2	527.2	527.9	0.7
062	6,184	45	297	10.1	533.0	533.0	534.0	1.0
076	7,649	132	673	3.9	540.5	540.5	541.2	0.7
095	9,500	200	1,121	2.4	545.7	545.7	546.6	1.0
115	11,527	113	689	3.5	550.6	550.6	551.4	0.8
130	13,000	366	1,778	1.4	555.4	555.4	555.8	0.4
145	14,500	297	1,511	1.6	557.3	557.3	557.7	0.4
149	14,851	187	691	2.3	557.6	557.6	558.3	0.8
154	15,370	124	550	2.8	559.2	559.2	560.2	0.9
170	17,000	219	473	3.3	566.1	566.1	566.5	0.4
185	18,500	202	801	1.8	570.4	570.4	571.4	1.0
201	20,126	192	782	1.5	577.1	577.1	578.1	1.0
214	21,415	125	471	2.4	584.0	584.0	584.8	0.8
224	22,359	161	467	2.4	588.6	588.6	589.0	0.4
229	22,889	166	566	2.0	590.6	590.6	591.6	1.0
242	24,150	94	324	3.5	598.1	598.1	598.7	0.6
251	25,117	83	336	2.4	605.0	605.0	605.0	0.0
<b>Loves Creek Tributary 1</b>								
007	675	265	875	2.2	557.4	557.4	558.3	0.8
013	1,298	39	268	7.1	561.6	561.6	561.9	0.3
022	2,157	72	333	5.5	569.4	569.4	569.7	0.2
026	2,641	112	471	3.9	578.5	578.5	578.5	0.0
034	3,355	135	586	3.1	582.3	582.3	582.5	0.1
037	3,746	98	572	3.1	586.6	586.6	586.8	0.2
045	4,479	125	410	3.4	589.7	589.7	589.7	0.0
053	5,326	62	306	4.2	592.2	592.2	592.6	0.4
059	5,869	41	163	4.4	594.7	594.7	595.4	0.7

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
064	6,396	53	270	2.5	600.2	600.2	600.9	0.7
068	6,825	35	111	6.0	603.9	603.9	604.2	0.4
071	7,126	58	207	3.2	607.2	607.2	607.2	0.1
074	7,421	96	364	1.7	611.8	611.8	612.4	0.6
078	7,758	80	281	2.2	611.9	611.9	612.7	0.8
082	8,193	101	367	1.4	616.2	616.2	616.4	0.1
084	8,449	32	104	4.9	616.8	616.8	616.9	0.1
<b>Morris Branch</b>								
011	1,072	237	1,015	1.5	240.6	240.6	241.5	1.0
020	1,999	120	426	3.5	242.8	242.8	243.6	0.8
028	2,795	101	472	3.1	245.4	245.4	246.2	0.8
033	3,252	40	209	4.4	248.8	248.8	249.4	0.6
034	3,424	40	275	5.3	248.3	248.3	248.5	0.2
<b>Panther Creek</b>								
010	991	1,146	3,727	1.0	237.8 <sup>1</sup>	222.8	223.8	1.0
027	2,743	399	2,892	1.3	237.8 <sup>1</sup>	229.5	230.1	0.5
043	4,339	449	2,517	1.4	237.8 <sup>1</sup>	230.3	231.0	0.7
062	6,214	551	2,545	1.4	237.8 <sup>1</sup>	232.1	233.1	1.0
078	7,796	115	756	4.7	237.8 <sup>1</sup>	237.8	238.2	0.3
083	8,311	410	2,401	1.2	238.9	238.9	239.4	0.5
099	9,863	201	897	2.6	239.6	239.6	240.6	1.0
113	11,317	205	1,096	2.1	243.2	243.2	244.1	0.9
<b>Pokeberry Creek</b>								
114	11,368	62	438	7.2	345.5	345.5	345.8	0.3
128	12,778	166	1,087	2.6	348.9	348.9	349.6	0.7
144	14,351	111	791	3.6	354.9	354.9	355.3	0.4
153	15,266	95	727	4.0	357.6	357.6	358.0	0.4
163	16,317	181	1,204	2.3	359.4	359.4	360.3	0.9
171	17,064	112	713	3.8	360.6	360.6	361.4	0.8
179	17,880	108	652	4.0	364.4	364.4	364.5	0.1
185	18,504	292	1,686	1.5	364.9	364.9	365.7	0.7
199	19,922	622	2,318	1.1	366.5	366.5	367.0	0.5
209	20,906	161	777	3.3	370.0	370.0	370.3	0.4
223	22,263	241	2,260	1.0	377.8	377.8	378.6	0.8
230	23,014	398	2,991	0.7	377.9	377.9	378.7	0.9
240	24,008	305	1,701	1.3	379.0	379.0	379.7	0.7
250	25,016	337	1,785	1.2	380.0	380.0	380.9	1.0
267	26,656	213	860	2.2	382.7	382.7	383.7	1.0
271	27,118	116	842	2.2	388.0	388.0	388.2	0.2
280	28,049	144	784	2.4	388.3	388.3	389.0	0.7
286	28,603	104	534	3.2	389.3	389.3	389.9	0.6
292	29,231	93	465	3.6	390.9	390.9	391.3	0.4
305	30,501	102	322	5.2	395.8	395.8	396.1	0.3
320	32,026	264	1,328	1.2	402.8	402.8	403.1	0.2
330	32,992	160	796	1.8	404.5	404.5	405.2	0.6

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
345	34,471	130	430	3.4	409.4	409.4	409.5	0.1
352	35,174	170	760	1.7	412.5	412.5	412.9	0.4
358	35,848	193	532	2.5	414.0	414.0	414.6	0.7
366	36,585	135	544	2.4	417.4	417.4	417.9	0.5
376	37,627	120	458	2.9	421.9	421.9	422.3	0.4
388	38,777	120	453	2.9	427.4	427.4	427.7	0.3
392	39,246	60	213	3.2	429.5	429.5	429.6	0.2
400	40,023	20	90	7.5	434.2	434.2	434.7	0.4
410	40,990	21	74	8.5	442.8	442.8	442.8	0.0
418	41,849	28	86	7.3	452.9	452.9	453.0	0.0
425	42,542	16	64	7.9	462.0	462.0	462.2	0.2
432	43,153	16	62	6.8	472.5	472.5	472.6	0.0
438	43,821	42	130	3.2	480.7	480.7	481.1	0.4
443	44,335	46	115	1.8	487.6	487.6	487.8	0.2
449	44,865	194	1,259	0.1	513.6	513.6	513.6	0.0
454	45,379	53	200	0.7	519.4	519.4	519.4	0.0
459	45,869	22	117	0.9	536.9	536.9	537.0	0.0
464	46,430	4	13	8.4	550.3	550.3	550.3	0.0
<b>Robeson Creek</b>								
007	670	330	4,903	1.2	237.8 <sup>1</sup>	229.5	230.5	1.0
010	1,000	279	4,405	1.4	237.8 <sup>1</sup>	229.6	230.6	1.0
015	1,500	236	3,737	1.6	237.8 <sup>1</sup>	229.6	230.6	1.0
021	2,066	246	3,887	1.6	237.8 <sup>1</sup>	229.7	230.7	1.0
026	2,578	287	4,611	1.3	237.8 <sup>1</sup>	229.8	230.8	1.0
030	3,000	270	4,201	1.4	237.8 <sup>1</sup>	229.8	230.8	1.0
035	3,473	296	4,743	1.3	237.8 <sup>1</sup>	229.9	230.9	1.0
040	4,000	299	4,793	1.3	237.8 <sup>1</sup>	230.0	230.9	1.0
045	4,453	240	3,888	1.6	237.8 <sup>1</sup>	230.0	231.0	1.0
050	5,000	240	3,919	1.5	237.8 <sup>1</sup>	230.1	231.0	1.0
055	5,500	240	3,925	1.5	237.8 <sup>1</sup>	230.1	231.1	1.0
062	6,177	205	3,113	1.9	237.8 <sup>1</sup>	232.0	232.8	0.9
069	6,922	270	3,037	2.0	237.8 <sup>1</sup>	232.1	233.0	0.9
076	7,560	147	1,468	4.1	237.8 <sup>1</sup>	232.3	233.2	0.9
084	8,424	90	890	6.8	237.8 <sup>1</sup>	233.6	234.4	0.9
088	8,845	63	729	8.3	237.8 <sup>1</sup>	235.0	235.6	0.6
094	9,446	63	612	9.8	237.8 <sup>1</sup>	236.7	237.6	0.8
099	9,929	67	773	8.8	239.4	239.4	240.0	0.6
104	10,445	54	578	10.4	240.5	240.5	241.5	1.0
109	10,928	64	483	12.5	243.1	243.1	244.1	1.0
114	11,428	64	649	9.3	248.3	248.3	248.8	0.5
119	11,928	65	548	11.0	250.4	250.4	250.9	0.5
124	12,428	69	686	8.8	255.2	255.2	256.2	1.0
129	12,878	92	845	7.1	258.6	258.6	259.5	0.9
134	13,428	100	724	8.3	262.0	262.0	263.0	1.0
139	13,928	240	1,353	4.5	267.5	267.5	268.1	0.6

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
145	14,462	150	872	6.9	270.3	270.3	271.3	1.0
150	15,005	120	990	6.1	275.8	275.8	276.0	0.3
156	15,585	90	639	9.4	278.3	278.3	279.3	0.9
159	15,928	70	562	10.7	281.6	281.6	282.2	0.7
164	16,428	115	1,224	4.9	286.0	286.0	286.7	0.6
170	16,962	115	837	7.2	287.4	287.4	288.2	0.9
178	17,834	170	1,695	3.6	291.7	291.7	292.4	0.7
187	18,683	245	2,131	2.8	292.8	292.8	293.7	0.8
194	19,428	375	3,285	1.7	293.6	293.6	294.6	1.0
199	19,928	126	1,277	4.3	293.7	293.7	294.7	1.0
204	20,428	64	750	7.3	294.3	294.3	295.2	1.0
209	20,928	85	797	6.9	295.8	295.8	296.7	1.0
214	21,428	70	723	7.2	297.6	297.6	298.6	1.0
223	22,273	125	956	5.3	300.4	300.4	301.3	1.0
229	22,928	61	680	7.3	302.1	302.1	303.1	1.0
234	23,428	90	822	6.0	303.4	303.4	304.4	1.0
239	23,928	160	1,207	4.1	305.4	305.4	306.0	0.7
244	24,428	125	935	5.3	306.4	306.4	307.3	0.9
249	24,928	105	1,033	4.9	307.8	307.8	308.8	0.9
255	25,460	135	1,408	3.5	308.9	308.9	309.9	1.0
261	26,105	78	703	7.1	309.9	309.9	310.9	1.0
268	26,775	145	1,207	4.1	312.7	312.7	313.7	1.0
275	27,509	169	1,199	4.1	314.6	314.6	315.4	0.8
281	28,130	120	1,115	4.5	315.8	315.8	316.8	1.0
288	28,808	123	1,106	4.5	317.2	317.2	318.2	1.0
295	29,458	197	1,590	3.1	318.3	318.3	319.3	1.0
299	29,935	128	1,178	4.2	318.9	318.9	319.8	0.9
304	30,428	104	818	6.1	319.7	319.7	320.5	0.8
309	30,928	76	734	6.8	321.2	321.2	322.0	0.8
314	31,428	87	832	5.1	322.6	322.6	323.5	0.8
319	31,905	89	846	5.0	323.4	323.4	324.2	0.8
324	32,428	70	521	6.6	324.4	324.4	325.1	0.7
329	32,928	66	585	5.9	326.2	326.2	327.0	0.8
334	33,410	77	626	5.5	327.5	327.5	328.3	0.8
338	33,843	54	490	7.0	328.6	328.6	329.3	0.7
345	34,456	51	389	8.9	330.8	330.8	331.5	0.6
349	34,928	64	528	7.8	333.3	333.3	333.9	0.6
354	35,428	91	753	4.6	334.7	334.7	335.4	0.7
359	35,928	143	1,051	3.3	335.7	335.7	336.5	0.8
366	36,634	155	1,000	7.0	337.2	337.2	337.9	0.7
373	37,346	150	1,364	2.5	338.6	338.6	339.4	0.8
380	37,976	118	744	4.6	339.5	339.5	340.2	0.7
385	38,478	116	799	8.2	341.4	341.4	342.2	0.7
390	38,994	188	1,252	2.8	343.1	343.1	343.9	0.8

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
394	39,387	110	769	4.5	343.8	343.8	344.5	0.7
399	39,928	146	967	3.6	345.3	345.3	346.0	0.8
404	40,399	121	834	4.1	346.3	346.3	347.0	0.7
409	40,863	80	607	5.7	347.5	347.5	348.2	0.7
412	41,158	94	742	4.7	348.6	348.6	349.3	0.7
424	42,413	95	894	3.1	353.1	353.1	353.2	0.0
431	43,129	97	975	2.8	353.4	353.4	353.9	0.4
440	43,962	78	561	4.9	356.9	356.9	357.0	0.0
443	44,324	265	697	6.4	357.6	357.6	357.6	0.0
451	45,069	260	351	7.8	360.2	360.2	360.6	0.4
459	45,895	90	568	4.8	365.3	365.3	365.4	0.1
464	46,372	100	628	4.3	366.3	366.3	366.6	0.3
469	46,928	100	793	3.5	367.1	367.1	367.9	0.8
475	47,454	98	890	2.6	368.9	368.9	369.4	0.5
479	47,925	105	852	2.8	369.1	369.1	369.9	0.8
483	48,307	120	909	4.9	369.5	369.5	370.2	0.7
489	48,928	180	1,250	1.9	370.1	370.1	371.0	0.8
495	49,453	200	1,376	1.7	370.5	370.5	371.4	0.9
499	49,928	150	828	2.8	370.8	370.8	371.8	1.0
504	50,428	100	669	3.5	372.0	372.0	372.8	0.9
509	50,928	140	796	2.9	373.3	373.3	374.0	0.6
514	51,428	160	834	2.8	374.3	374.3	375.0	0.7
519	51,928	174	897	2.6	375.2	375.2	375.9	0.8
525	52,518	160	915	2.6	375.8	375.8	376.7	1.0
530	52,995	140	887	2.6	376.7	376.7	377.4	0.7
534	53,428	56	251	5.1	377.2	377.2	378.2	1.0
539	53,928	70	171	8.6	381.1	381.1	381.1	0.0
543	54,328	70	235	3.7	384.6	384.6	385.2	0.6
553	55,310	70	373	2.3	390.7	390.7	391.6	0.8
559	55,928	130	429	2.0	393.0	393.0	393.0	0.0
564	56,360	125	406	2.1	394.5	394.5	395.1	0.6
568	56,844	90	352	2.5	396.4	396.4	397.3	0.9
574	57,365	40	184	4.7	399.3	399.3	400.2	0.9
579	57,928	104	303	2.9	404.4	404.4	404.8	0.5
588	58,754	175	539	1.6	407.4	407.4	408.2	0.8
595	59,461	95	327	2.7	409.5	409.5	410.5	1.0
604	60,428	89	386	2.3	415.4	415.4	416.4	1.0
609	60,860	95	421	2.1	416.8	416.8	417.8	1.0
614	61,428	95	371	2.4	419.0	419.0	419.5	0.5
619	61,872	130	502	1.7	420.4	420.4	421.0	0.6
624	62,401	90	285	3.1	422.3	422.3	423.1	0.8
629	62,928	60	296	2.9	426.8	426.8	427.0	0.2
635	63,465	80	351	2.5	429.5	429.5	430.5	1.0
640	64,013	55	199	1.9	432.4	432.4	433.1	0.7



**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
646	64,565	22	66	5.6	435.2	435.2	435.8	0.6
652	65,197	24	103	3.6	443.1	443.1	443.8	0.6
657	65,729	24	118	3.1	446.0	446.0	446.8	0.9
667	66,669	22	53	7.0	457.5	457.5	457.8	0.3
671	67,111	22	56	6.7	465.4	465.4	465.4	0.0
676	67,639	32	54	6.9	480.8	480.8	480.8	0.0
<b>Robeson Creek Tributary 3</b>								
001	72	82	299	4.4	352.4 <sup>1</sup>	347.6	348.0	0.4
009	912	49	242	5.4	356.1	356.1	356.7	0.7
015	1,548	43	184	7.1	360.7	360.7	361.4	0.8
020	1,955	39	247	4.6	365.7	365.7	365.8	0.1
032	3,159	66	153	7.2	378.6	378.6	378.6	0.0
046	4,558	193	581	1.8	388.9	388.9	389.8	0.8
054	5,384	170	405	2.3	394.5	394.5	395.4	0.9
062	6,198	70	172	3.2	405.1	405.1	405.7	0.6
068	6,800	67	232	2.4	412.5	412.5	413.4	0.9
072	7,242	42	106	5.1	419.0	419.0	419.6	0.7
<b>Rocky River</b>								
1286	128,569	100	1,613	7.1	500.2	500.2	501.0	0.7
1292	129,202	116	1,597	6.0	501.3	501.3	502.0	0.7
1297	129,733	127	1,817	5.3	502.1	502.1	502.8	0.7
1300	130,034	182	2,371	4.1	502.7	502.7	503.4	0.7
1306	130,586	246	2,884	3.3	503.1	503.1	503.8	0.7
1313	131,274	199	1,816	5.3	507.2	507.2	507.3	0.1
1320	132,010	186	1,751	5.4	508.1	508.1	508.2	0.1
1329	132,892	105	1,558	6.0	509.1	509.1	509.3	0.2
1336	133,586	105	1,649	5.7	509.7	509.7	510.2	0.4
1345	134,498	105	1,725	5.5	510.6	510.6	511.1	0.5
1354	135,378	144	2,050	4.6	511.4	511.4	512.0	0.6
1361	136,075	108	1,704	5.5	511.9	511.9	512.6	0.7
1368	136,848	232	2,926	3.2	512.8	512.8	513.4	0.7
1379	137,928	135	1,977	4.7	513.3	513.3	514.1	0.7
1386	138,555	114	1,936	4.8	513.8	513.8	514.5	0.8
1391	139,149	114	1,955	4.8	514.1	514.1	514.9	0.8
1400	140,008	114	1,991	4.7	514.5	514.5	515.3	0.8
1408	140,823	135	2,320	4.0	515.0	515.0	515.8	0.8
1419	141,876	133	1,992	4.7	515.6	515.6	516.4	0.8
1429	142,896	110	1,706	5.0	516.3	516.3	517.1	0.8
1437	143,671	103	1,692	5.1	517.0	517.0	517.8	0.8
1445	144,545	107	1,890	4.5	517.8	517.8	518.7	0.9
1454	145,375	162	1,988	4.3	518.6	518.6	519.4	0.8
1459	145,868	85	1,259	6.8	519.6	519.6	519.9	0.3
1464	146,397	84	1,128	7.6	520.2	520.2	520.9	0.7
1474	147,402	112	1,395	6.1	522.5	522.5	523.1	0.6
<b>Rocky River Tributary 1</b>								

**Table 22 - Floodway Data**

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
005	483	95	550	3.1	507.9 <sup>1</sup>	506.6	507.4	0.9
011	1,069	98	448	3.8	513.5	513.5	514.4	0.9
018	1,769	59	219	7.7	523.9	523.9	524.2	0.3
025	2,548	62	239	6.7	532.6	532.6	533.4	0.8
031	3,121	165	904	1.8	542.6	542.6	542.6	0.0
038	3,779	162	702	2.2	544.1	544.1	544.2	0.1
048	4,835	67	328	4.6	546.2	546.2	547.0	0.8
060	5,997	82	381	3.4	551.0	551.0	551.6	0.7
072	7,247	188	687	1.9	555.1	555.1	555.9	0.8
082	8,151	123	499	2.4	560.3	560.3	560.7	0.4
089	8,876	120	360	3.2	562.4	562.4	563.1	0.7
095	9,489	147	496	2.4	565.8	565.8	566.3	0.6
099	9,908	113	451	1.6	567.0	567.0	567.8	0.8
104	10,412	93	276	2.6	568.8	568.8	569.6	0.8
108	10,808	86	215	3.4	570.2	570.2	570.9	0.6
111	11,067	55	354	1.8	575.0	575.0	575.6	0.5
114	11,394	203	822	0.8	575.1	575.1	575.7	0.6
119	11,894	117	366	1.8	575.8	575.8	576.4	0.6
<b>Southwest Creek</b>								
083	8,271	50	304	7.3	237.8 <sup>1</sup>	234.2	234.4	0.1
090	8,995	142	660	3.4	237.8 <sup>1</sup>	237.7	238.6	0.9
095	9,507	190	949	2.3	238.9	238.9	239.9	1.0
<b>Wilkinson Creek</b>								
223	22,269	337	1,969	1.0	417.9	417.9	418.8	0.9
230	22,972	305	1,728	1.2	419.1	419.1	419.8	0.8
238	23,760	125	621	2.7	420.4	420.4	420.9	0.5
248	24,842	230	803	2.1	421.8	421.8	422.3	0.5
253	25,329	58	582	2.8	430.3	430.3	430.7	0.4
264	26,402	200	1,145	1.4	430.9	430.9	431.4	0.5
276	27,578	125	541	2.8	433.4	433.4	434.2	0.8
284	28,425	55	297	5.1	436.1	436.1	436.6	0.5
295	29,485	52	512	2.7	443.9	443.9	444.4	0.5
305	30,475	160	938	1.5	444.6	444.6	445.2	0.6
316	31,600	63	226	6.1	447.2	447.2	447.6	0.4
325	32,467	80	311	4.1	453.8	453.8	453.8	0.0
334	33,416	35	162	7.9	464.4	464.4	464.5	0.1
340	33,963	46	170	6.6	472.8	472.8	473.1	0.3
349	34,944	185	2,228	0.4	490.1	490.1	490.9	0.8
357	35,655	220	2,330	0.4	490.1	490.1	490.9	0.8
366	36,594	62	247	4.1	491.3	491.3	491.8	0.5
376	37,627	44	217	4.7	501.2	501.2	501.2	0.0

<sup>1</sup>Elevation includes backwater effects

## 6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 23.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1% annual chance flood condition):

- *The primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- *The wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.
- *The wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.
- *The breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- *The high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared ( $hv^2$ ) is greater than or equal to 200 ft<sup>3</sup>/sec<sup>2</sup>. This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 23, “Summary of Coastal Transect Mapping Considerations” is not applicable in Chatham County.

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. In areas where the Zone VE designation is based on the presence of a primary frontal dune the LiMWA was not delineated.

## 7.0 Revising the FIS

### 7.1 Letters of Map Amendment and Letters of Map Revision - Based on Fill

LOMAs and LOMR-Fs are documents issued by FEMA that officially remove a property and/or a structure from a Special Flood Hazard Area (SFHA), if data supporting the removal are submitted. LOMAs and LOMR-Fs are generally determinations regarding areas that are too small to be shown on a FIRM panel; consequently, the changes they describe become official without revising the FIRM or the FIS Report.

NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the 1% annual chance flood elevation for a LOMA to be issued. Currently, there is no fee for FEMA's review of a LOMA request, but the requester of a LOMA is responsible for providing all the information needed for the review, which may include structure and/or property elevations

certified by a licensed land surveyor or professional engineer. Therefore, LOMA requesters may need to retain the services of a land surveyor or engineer.

A LOMA cannot be used for property on which fill has been placed. For those situations, a LOMR-F must be used. As a participant in the NFIP, a local government must adopt ordinances that meet the minimum Federal floodplain management standards, which are outlined in Section 60.3 of the NFIP regulations. For a number of reasons, these ordinances generally vary from community to community. Nonetheless, because the placement of fill within the floodplain can affect flood hazards in the surrounding area, additional information is needed before FEMA can process a LOMR-F request. Among the data required for a LOMR-F is the community acknowledgment form. This form is FEMA's assurance that all appropriate Federal, State, and local floodplain management requirements have been met. Furthermore, NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the 1% annual chance flood elevation for a LOMR-F to be issued removing the structure from the floodplain. Because LOMR-F requests are the result of changed physical conditions rather than limitations of scale or topographic definition, FEMA charges a fee for the review of a LOMR-F request. As with the LOMA, the requester of a LOMR-F is responsible for providing all supporting information, including structure and/or property elevation data.

In cases where property owners plan to add fill in the SFHA, NFIP regulations require plans and technical information to be submitted for review by FEMA before construction takes place. FEMA will issue a conditional LOMR-F stating how flood hazards would change and what portions of the property, if any, would remain in the SFHA if the project were built according to the submitted plans.

The issuance of a LOMA or LOMR-F ends the property owner's obligation to purchase flood insurance as a condition of Federal or federally backed financing. However, the property owner's mortgage company maintains the prerogative to require flood insurance as a condition of providing financing. Before attempting to obtain a LOMA or LOMR-F, property owners are advised to consult their mortgage companies regarding this policy. Even if the mortgage company indicates that it will require flood insurance if a LOMA or LOMR-F is issued, it may be advantageous for property owners to request a LOMA or LOMR-F because flood insurance premiums are lower for properties removed from the SFHA than for properties that remain within the SFHA.

For additional information regarding LOMAs, LOMR-Fs, conditional LOMR-Fs, or current application fees, please call the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP (1-877-336-2627).

## 7.2 Letters of Map Revision

A Letter of Map Revision (LOMR) is a document issued by FEMA and the NCFMP that revises an FIS Report and/or FIRM. A LOMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations, or planimetric features such as road systems or corporate limits. A LOMR provides FEMA and the NCFMP with a cost-effective means of revising the FIS information without physically changing and reprinting the map or report itself. A portion of the FIRM panel or FIS Report showing the revised information is issued with the LOMR. The LOMR is sent to all affected communities and is archived in the communities' NFIP map repository for public reference.

In cases where a proposed project (such as construction in the 1% annual chance floodplain) would result in a significant rise in 1% annual chance water-surface elevations, NFIP regulations require the community to submit plans and technical information for review by FEMA and the NCFMP before construction takes place. This assures communities participating in the NFIP that proposed projects meet minimum NFIP requirements. The result of FEMA and the NCFMP reviews is documented in a conditional LOMR.

For additional information regarding LOMRs, conditional LOMRs, or current application fees, please call the FEMA Map Assistance Center toll-free information line at 1-877-FEMA MAP (1-877-336-2627) or the NCFMP at 919-715-5711.

## 7.3 Physical Map Revisions

Physical Map Revisions (PMRs) are processed to incorporate information concerning conditions present in the community that are not reflected in the FIS, and involve distributing republished FISs that supersede the most current NFIP data in the community repository.

PMRs may be initiated by a request from a community resident or agency, or FEMA may initiate a PMR to incorporate one or more LOMRs, to reflect significant changes in corporate limits, to correct errors, or to update flood hazards to match new information from an adjacent community's FIS. Due to the costs associated with updating and distributing FISs, map revisions will be processed as LOMRs rather than PMRs whenever possible. For more information regarding PMRs, please contact the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP (1-877-336-2627), the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report, or the NCFMP at 919-715-5711.

## 7.4 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards in a given community. FEMA accomplishes this through a national mapping needs assessment process that assigns priorities and allocates funds to sponsor or subsidize new flood hazard analyses used to update FIS Reports. For map maintenance restudies within the state of North Carolina, scoping will be performed by county approximately 2.5-3.5 years after the previous effective date. Scoping will focus on streams with restudy needs within those previously effective counties rather than on full countywide restudies. A restudy refers specifically to updating or reevaluating engineering analyses that were performed for a flood mapping project that directly impact BFEs and/or flood hazard boundary extents or analysis of previously unstudied flood prone areas. Restudy project evaluation triggers and prioritization values are an essential component of the map maintenance program. For more information regarding NCFMP-contracted restudies, please contact the NCFMP at 919-715-5711 or at [www.ncfloodmaps.com](http://www.ncfloodmaps.com). For more information regarding FEMA-contracted restudies, please contact the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP(1-877-336-2627) or the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

## 7.5 Map Revision History

The current FIRM is a subset of the Statewide FIRM, showing flood hazard information for the entire geographic area of Chatham County. Previously, separate Flood Hazard Boundary Maps (FHBMs), Flood Boundary and Floodway Maps (FBFMs), and/or FIRMs were prepared for each identified flood prone jurisdiction within the county. Historical data relating to the NFIP maps prepared for each community prior to and including the 2/2/2007 North Carolina Statewide FIRM, which includes Chatham County, are presented in Table 22, "Community Map History."

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Chatham County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FIS Reports, FHBMs, FIRMs, and/or FBFMs for all of the incorporated and unincorporated jurisdictions within Chatham County.

**Table 24 - Map Revision History**

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
CHATHAM COUNTY	5/19/1978	7/16/1991	02/02/2008
TOWN OF CARY	6/28/1974	7/17/1978	04/16/2013
TOWN OF GOLDSTON	2/2/2007	2/2/2007	02/02/2007
TOWN OF PITTSBORO	10/20/1978	2/2/2007	02/02/2007
TOWN OF SILER CITY	2/15/1974	7/2/1987	02/02/2007

## 8.0 Study Contracting and Community Coordination

### 8.1 Authority and Acknowledgments

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

This FIS revises and updates the previous countywide FIS for the geographic area of Chatham County and Incorporated Areas. Table 25, "Authority and Acknowledgments," includes information for the previous countywide FIS and for this revision. This table also includes information for the single-jurisdiction FISs published for each community included in this countywide FIS (if available) as compiled from their previously printed FIS Reports

**Table 25 — Authority and Acknowledgments**

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
CHATHAM COUNTY	2/2/2007	NCFMP	NCFMP	206-000-23	12/4/2013
CHATHAM COUNTY	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF CARY	2/2/2007	NCFMP	NCFMP	206-000-23	12/4/2013
TOWN OF CARY	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF GOLDSTON	2/2/2007	NCFMP	NCFMP	206-000-23	12/4/2013
TOWN OF GOLDSTON	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF PITTSBORO	2/2/2007	NCFMP	NCFMP	206-000-23	12/4/2013
TOWN OF PITTSBORO	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF SILER CITY	2/2/2007	NCFMP	NCFMP	206-000-23	12/4/2013
TOWN OF SILER CITY	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888

This FIS Report was produced through a unique cooperative partnership between the State of North Carolina and FEMA. The State of North Carolina, through FEMA's Cooperating Technical Partner (CTP) Initiative, has become the first Cooperating Technical State (CTS) and will assume primary ownership of the NFIP FIRM panels for all North Carolina communities. This role has traditionally been fulfilled by FEMA. The North Carolina Floodplain Mapping Program is conducting flood hazard analyses and producing updated, digital FIRM panels. The hydrologic and hydraulic analyses and the FIRM panels for the initial statewide mapping for Chatham County were produced by NCFMP under contract with the State of North Carolina and issued on effective 3/31/2015. For this revision, the hydrologic and hydraulic analyses and the FIRM panels were produced by NCFMP, under contract with the State of North Carolina.

## 8.2 Consultation Coordination Officer's Meetings/Scoping Meetings

In general, for each FIS an initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the communities, and the study contractors to explain the nature and purpose of the FIS and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the communities, and the study contractors to review the results of the study.

The dates of the initial and final CCO meetings held for Chatham County and Incorporated Areas were compiled from the previous countywide FIS Report and are shown in Table 26, "Consultation Coordination Officer's Meetings."

**Table 26 — Consultation Coordination Officer's Meetings**

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
CHATHAM COUNTY	7/16/1991	7/2/1987	Local communities, Chatham County, the State of North Carolina, FEMA and the Study Contractor	8/20/1990	Representatives of the study contractor, FEMA, and the county
CHATHAM COUNTY	7/16/1991	7/2/1987	Local communities, Chatham County, the State of North Carolina, FEMA and the Study Contractor	8/21/1990	Representatives of local communities, Sampson County, the State, FEMA, and the study contractor
CHATHAM COUNTY	7/16/1991	7/2/1987	Local communities, Chatham County, the State of North Carolina, FEMA and the Study Contractor	8/21/1990	Representatives of the communities, FEMA, and the study contractor
CHATHAM COUNTY	7/16/1991	7/2/1987	Local communities, Chatham County, the State of North Carolina, FEMA and the Study Contractor	8/21/1990	Representatives of the Study Contractor, FEMA, and the community
CHATHAM COUNTY	7/16/1991	7/2/1987	Local communities, Chatham County, the State of North Carolina, FEMA and the Study Contractor	8/21/1990	Representatives of the study contractor, FEMA, and the county

For each FIS produced during the initial phase of statewide, an Initial Scoping Meeting was held with representatives from FEMA, the county, the incorporated communities, and the State of North Carolina. A Final Scoping meeting was held to review the Draft Basin Plan and finalize the streams to be studied by detailed methods. This information was then used to create the Final Basin Plan.

For map maintenance revisions, only one scoping meeting was held to identify the streams to be newly studied by detailed methods, redelineated, or to be studied by limited detailed methods. This information was then used to create the Map Maintenance Plan.

The historical dates of the Initial and Final Scoping Meetings held during the first round of statewide mapping for Chatham County are shown in Table 27, "Scoping Meetings." Meetings held for the map maintenance revision are also included below for Chatham County.

**Table 27 — Scoping Meetings**

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
CHATHAM COUNTY	CAPE FEAR	12/5/2000	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry	3/6/2001	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry
TOWN OF CARY	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State, FEMA, Dewberry, county, Raleigh, Apex, Cary, Garner, Holly Springs, Knightdale, Wake Forest, Wndell, Zebulon
TOWN OF SILER CITY	CAPE FEAR	12/5/2000	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry	3/6/2001	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry
TOWN OF SILER CITY ETJ	CAPE FEAR	12/5/2000	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry	3/6/2001	Representatives of the community, FEMA, NCFMP, NCEM, and Dewberry

Preliminary Meetings are held in each county to disseminate and review the FIS Report and FIRM panels. This meeting is required by FEMA. Public Participation Meetings are not required by FEMA, but provide an opportunity to review and discuss the FIS Report and FIRM panels for each jurisdiction in a public setting. The dates for the preliminary and public participation meetings are shown in Table 28, "Preliminary and Public Participation Meetings."

**Table 28 — Preliminary and Public Participation Meetings**

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
TOWN OF PITTSBORO	2/2/2007	Town of Pittsboro	8/23/2005	Officials from Chatham County, NCDEM, Dewberry and Watershed Concepts	8/30/2005	The Public
TOWN OF PITTSBORO ETJ	2/2/2007	Town of Pittsboro	8/23/2005	Officials from Chatham County, NCDEM, Dewberry and Watershed Concepts	8/30/2005	The Public

## 9.0 Guide to Additional Information

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see <http://www.fema.gov>.

The Map Repositories table below lists locations where FIRMs for Chatham County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

**Table 27 — Map Repositories**

Community	Address	City	State	Zip Code
Town of Goldston	Chatham County Planning Department, 80-A East Street	Pittsboro	NC	27312
Town of Siler City	Siler City Town Planning Department, 311 North Second Avenue, Room 301	Siler City	NC	27344
Town of Cary	Cary Stormwater Services Division, Town Hall, 316 North Academy Street	Cary	NC	27513
Town of Pittsboro	Pittsboro Town Planning Department, 635 East Street	Pittsboro	NC	27312
Chatham County	Chatham County Planning Department, 80-A East Street	Pittsboro	NC	27312

## 9.1 Additional Information

All FIRM panels created for the State of North Carolina are produced in a seamless statewide format; however, FIS Reports are produced for individual counties.

Copies of FIRM panels are available for a nominal fee. To obtain a copy of the current flood map for a specific community, contact the FEMA Map Service Center at 1-800-358-9616. To facilitate the processing of your request, please review the current flood map on file at your local community repository and obtain the panel number in which you are interested. If necessary, users may also order a FIRM Index from the Map Service Center to determine the appropriate panel numbers. The Map Service Center also accepts orders for the Community Status Book and the Flood Insurance Manual. The FIS Report, FIRM panels, and digital data used to produce the FIRM panels are available online at [www.ncfloodmaps.com](http://www.ncfloodmaps.com).

Information concerning the data used in the preparation of this FIS, contained in an Engineering Study Data Package, may be obtained by contacting the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

Table 28, "Additional Information" is not applicable in Chatham County.

## 10.0 Appendix

### 10.1 Bibliography

All bibliography and reference information associated within this Flood Insurance Study are maintained and accessible within the geodatabase structure and associated metadata. Users requiring more specific information should contact the North Carolina Floodplain Mapping Program (NCFMP) at [www.ncfloodmaps.com](http://www.ncfloodmaps.com) under the Contacts menu